

MANUFACTURERS' RECORD

A Weekly Southern Industrial and Hardware Newspaper.

VOL. XII. No. 26. { WEEKLY. } BALTIMORE, FEBRUARY 4, 1888. { \$3.00 A YEAR. SINGLE COPIES, 10 CENTS. }

EUREKA PACKING Sole Manufacturers of **JAS. SMITH & CO.** Dealers in
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 Works: FRANKFORD AVE., WILDEY & SHACKANAXON STS. PHILADELPHIA, PA.
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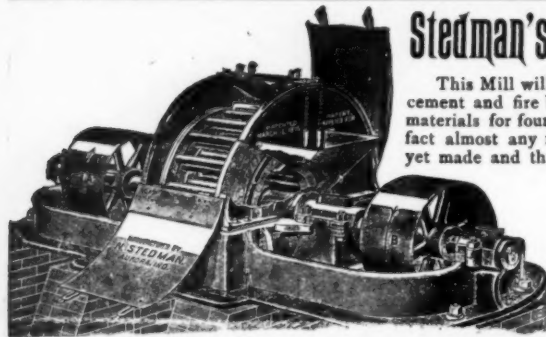
Report of the **AQUEDUCT** Commissioners.
 [NEW CROTON AQUEDUCT, NEW YORK.]
 AN ELABORATE VOLUME, CONTAINING AUTHORITATIVE TABLES BY THE CHIEF ENG., B. S. CHURCH. JUST ISSUED.
PLANT (by actual count from Table 13.)
 Number of Ingersoll Drills used..... 243
 Number of Drills of all other kinds..... 103
PROGRESS (by actual figures from Table 8.)
 Average weekly progress in best 10 headings that used Ingersoll Drills exclusively (omitting all idle weeks)..... 35.73
 Average weekly progress in best 10 headings that used other drills exclusively (omitting all idle weeks) 31.88
 DIFFERENCE OF 20 PER CENT. IN FAVOR OF INGERSOLL DRILLS.
INGERSOLL ROCK DRILL CO., 10 Park Place, New York City.

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 "PERFECTION IN HOUSE HEATING BY STEAM."
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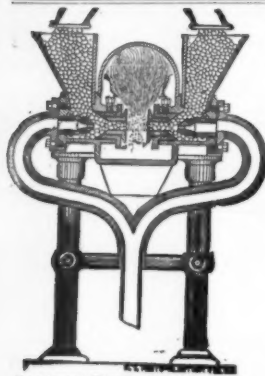


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This Mill will disintegrate or pulverize materials of all kinds, for brick and tile, for cement and fire brick, and slag from open air furnaces for use in rolling mills, and materials for foundry facings, iron ores, animal matter in almost all conditions,—in fact almost any material that can be disintegrated. It is an improvement over any yet made and the result of practical experience.

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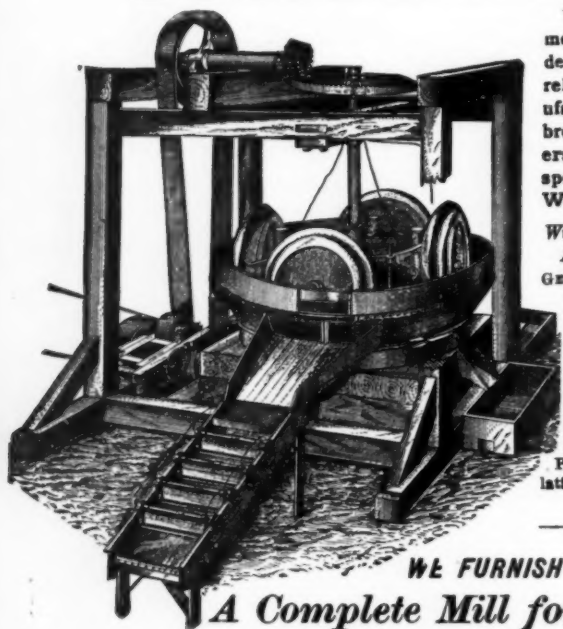
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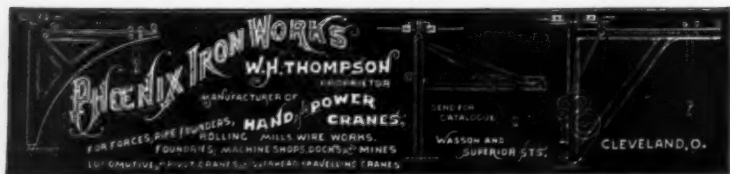
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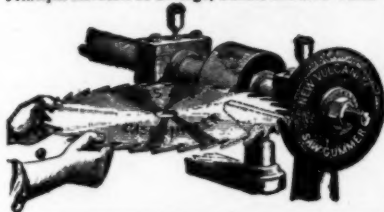
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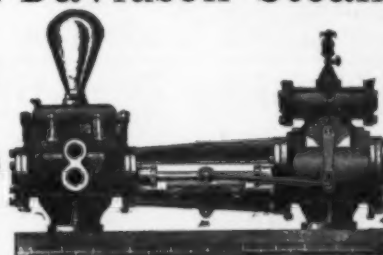


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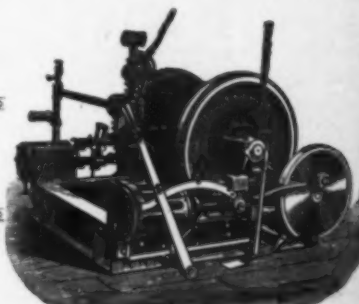
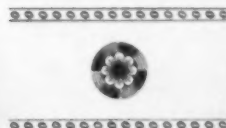
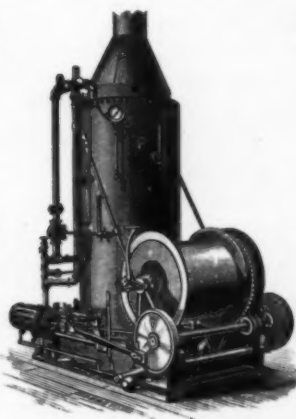
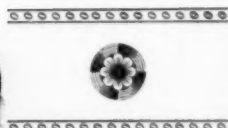
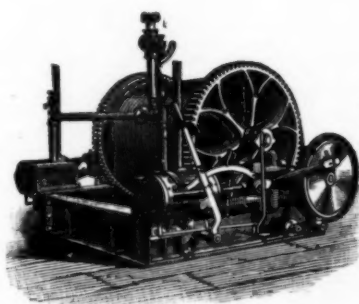
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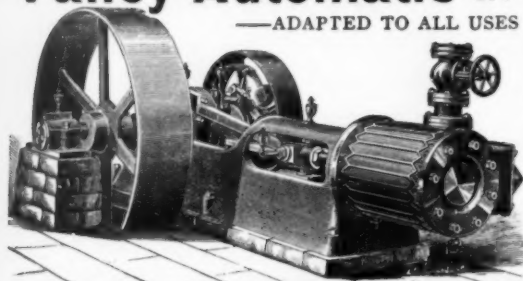
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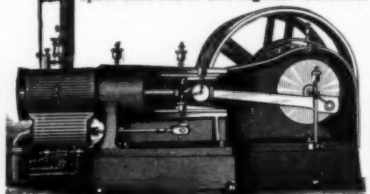
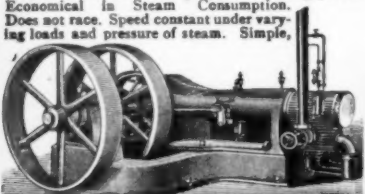
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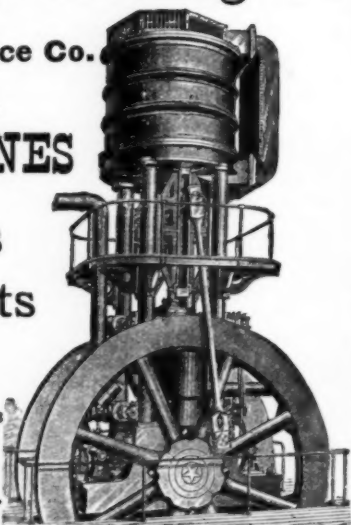
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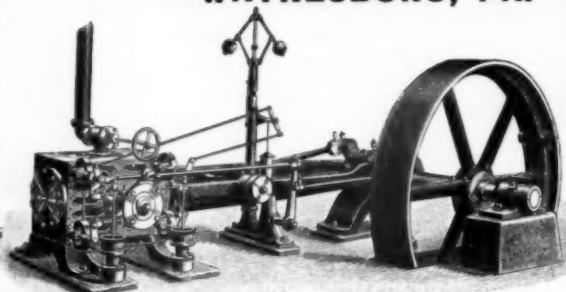
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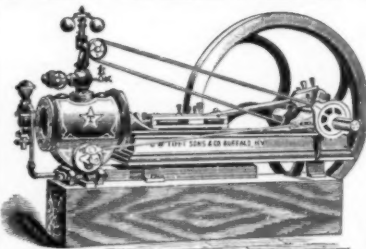
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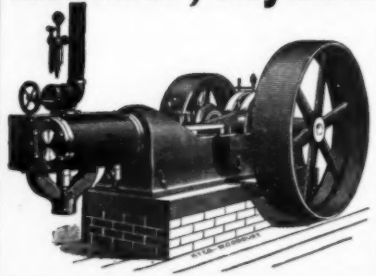
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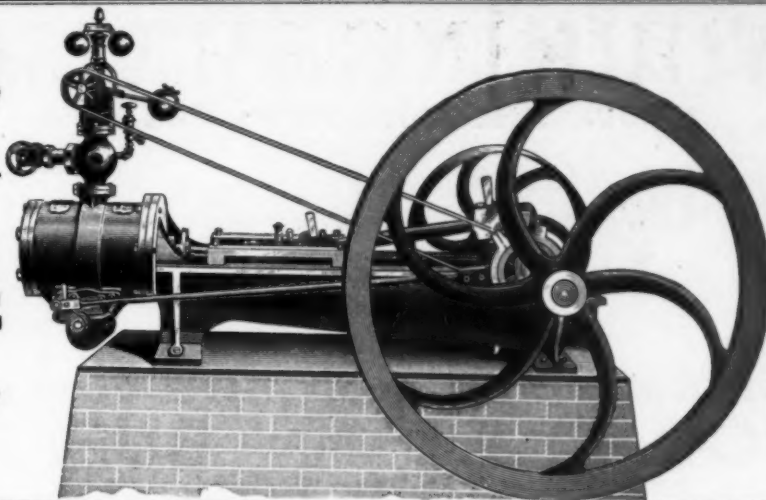
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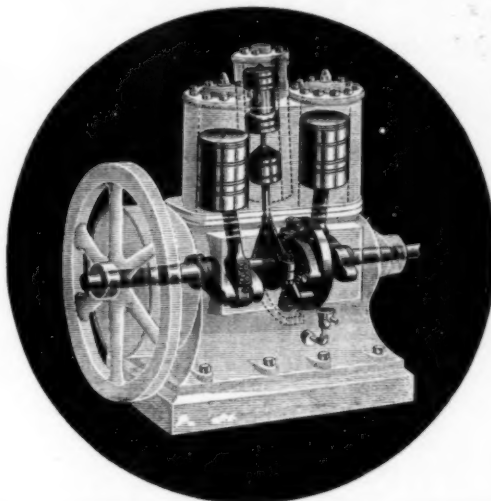
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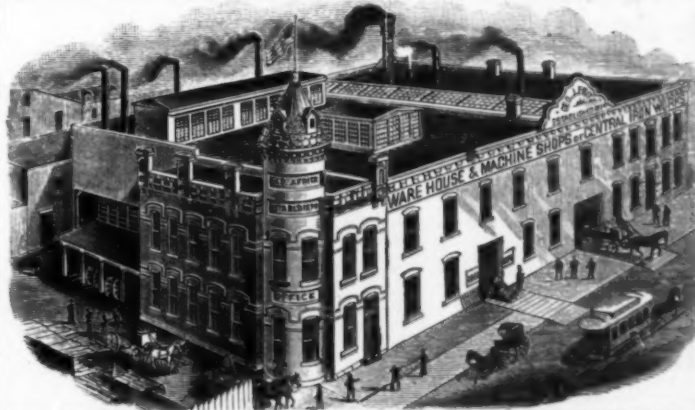
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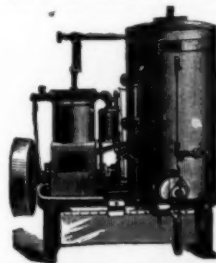
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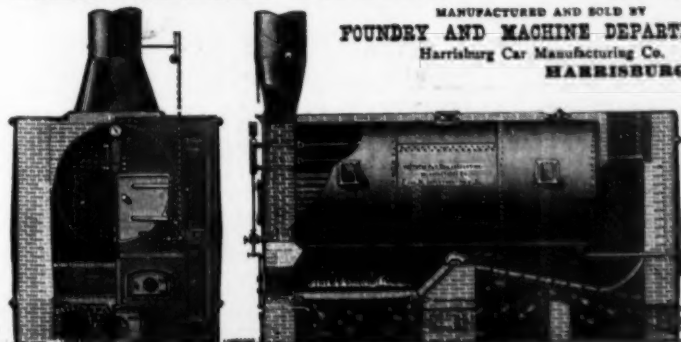
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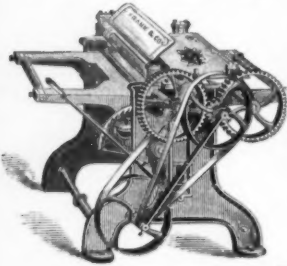
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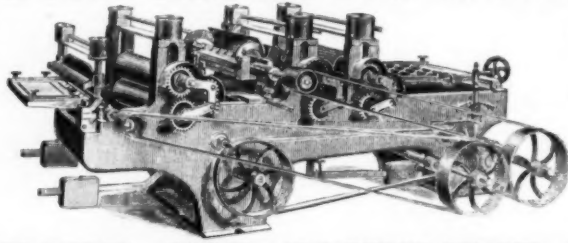
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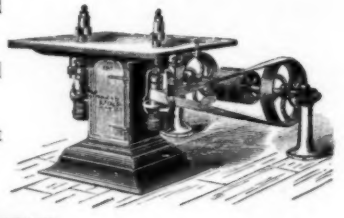


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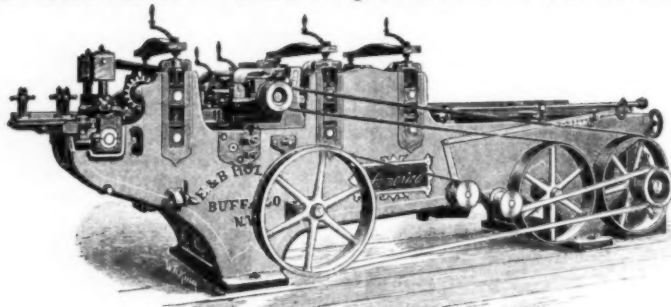
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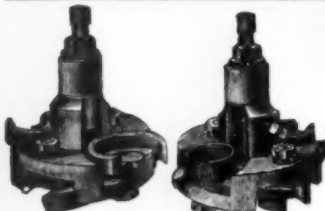
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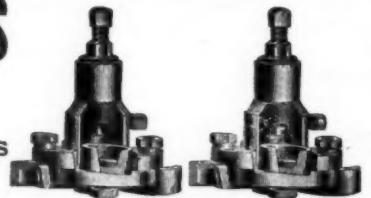


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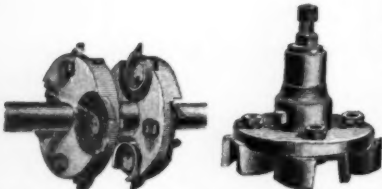
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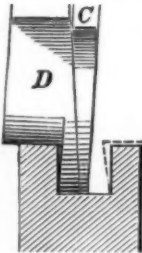


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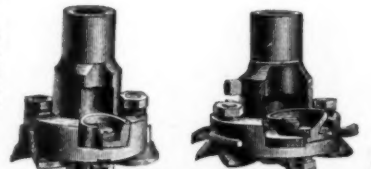


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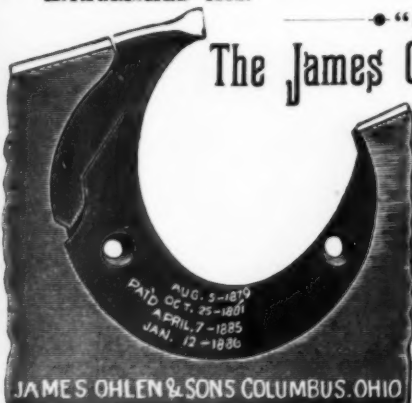
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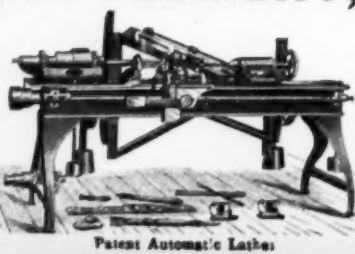
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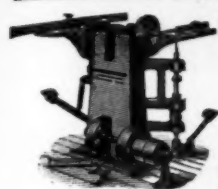
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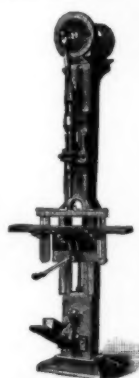
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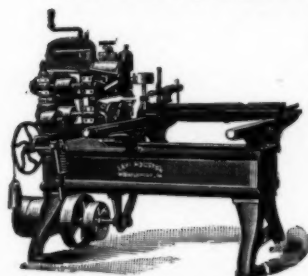
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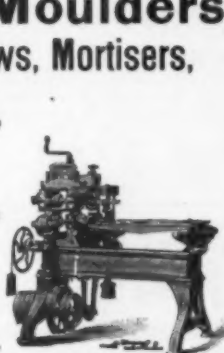
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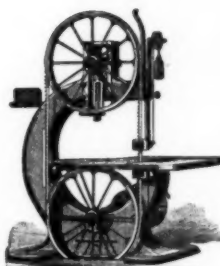
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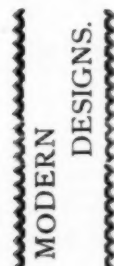
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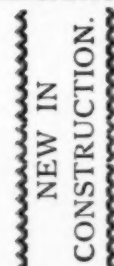
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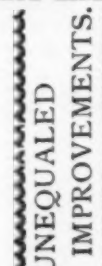
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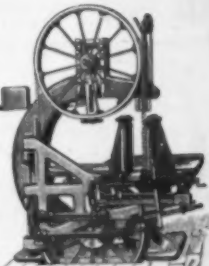
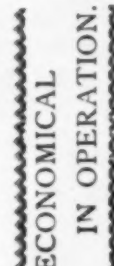
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No. 2 Scroll Saw.



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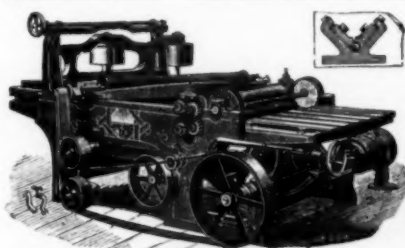


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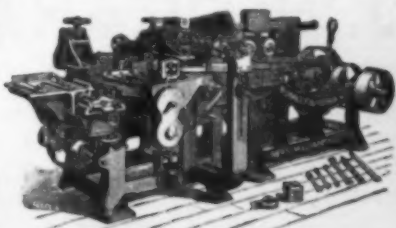
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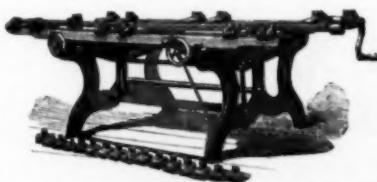
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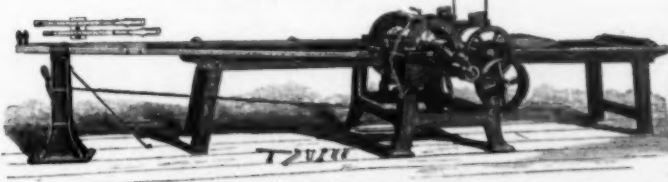
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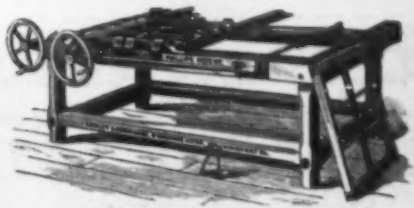
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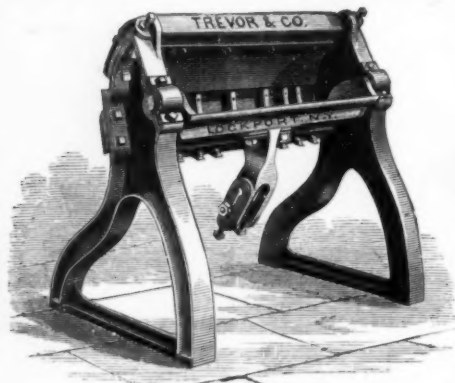
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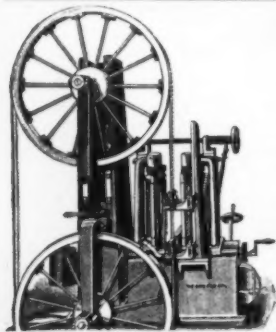
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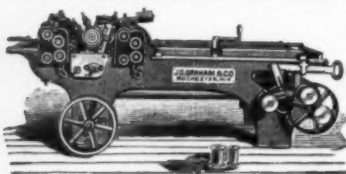
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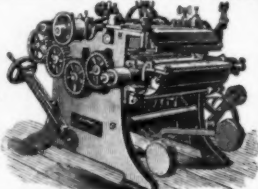
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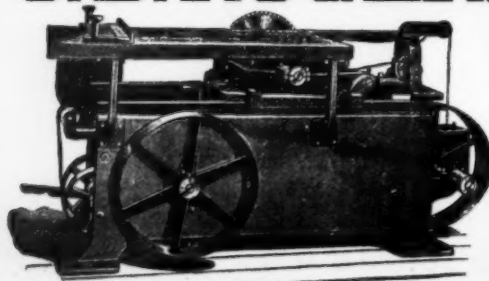


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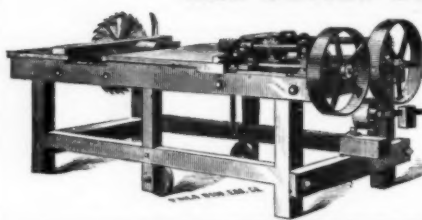
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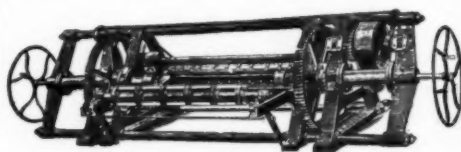


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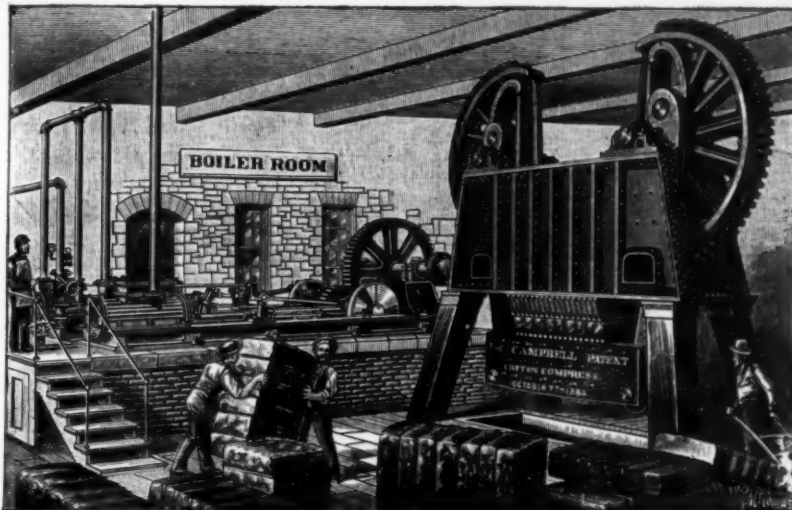
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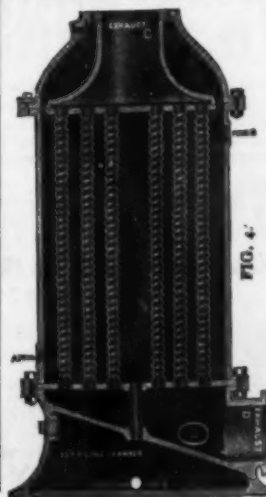
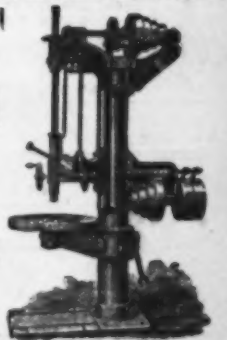
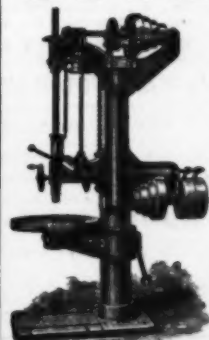
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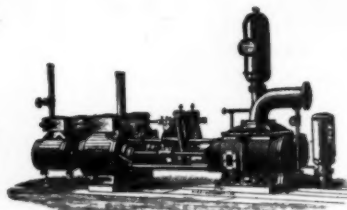
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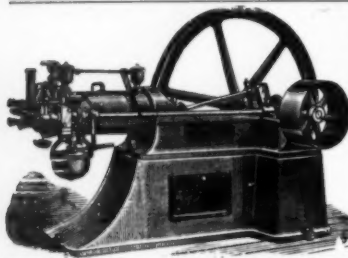
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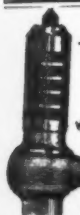
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Manufacturers' Record.

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R. H. EDMONDS, EDITOR.

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THROUGH special correspondence with the cotton mills of the South the MANUFACTURERS' RECORD is enabled to-day to present a list of every cotton mill in the fourteen Southern States, with the number of spindles and looms in each, a list of mills under construction and those projected, and also a list of mills that will add new machinery shortly. In fact, this is, to a considerable extent, a cotton mill issue, and the facts given regarding this leading industry will prove of universal interest. The views of mill managers as given in connection with this article upon the outlook for cotton manufacturing in the South show that while this business is now in a very prosperous condition, there is some danger of over-production, unless there is more diversity in the character of goods made. Diversity is essential to permanent prosperity in agriculture, in manufactures and in trade, and the South will do well if it appreciates this fact, and, as it builds up new industries, diversifies the character of their products.

MR. JOHN HILL, of the Eagle & Phoenix Mills, of Columbus, Ga., is one of the most noted experts in cotton manufacturing in the South. His views always and everywhere carry great weight. In this issue of the MANUFACTURERS' RECORD will be found a letter from him that will command wide attention. Mr. Hill claims, and no one is better able to judge than he, that there is a great future in store for the cotton manufacturing interests of the South. He shows that labor is abundant and that the people are eager for work; that the climate and other advantages are all on the side of the Southern mill, and the position so often taken by the MANUFACTURERS' RECORD is enforced in his letter, that in establishing a cotton mill, not only are good profits assured under careful management, but work is furnished to many hands that otherwise would be forced to remain in idleness.

If you are not already a subscriber to the MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year or six months for \$1.50.

Improved Condition of Southern Farmers.

That the financial condition of Southern farmers is better than for several years is very generally known, and it is interesting to study the cause. The final official reports of crops for 1887 show that the value of the corn crop of the South was \$27,800,000 greater than in 1886. If we omit Kentucky, which had a short corn crop on account of the severe drought, the other Southern States produced about 42,000,000 bushels more of corn in 1887 than in 1886. In Virginia there was an increase of 5,000,000 bushels, North Carolina 8,600,000 bushels, South Carolina 2,300,000 bushels, Georgia 800,000 bushels, Alabama nearly 5,000,000 bushels, Mississippi 7,000,000 bushels, Louisiana 3,600,000 bushels, and Texas 7,000,000 bushels. The cotton yield promises to prove to be about as much as in 1886, despite the predictions of a short crop, and the greatly enhanced price will doubtless add fully \$25,000,000 to \$30,000,000 to its value as compared with the preceding crop, while the cost of production was very much less than in former years, owing to the economy practiced by the farmers. Wheat and oats yielded a good average crop, while vegetables were more abundant than in any former year. In parts of the South much attention was given to grasses, and the crop, especially in Mississippi, was unusually good. Taking all crops, corn, cotton, wheat, oats, rice, sugar, tobacco, etc., and the enhanced values into consideration, it is very reasonable to estimate that agriculture yielded to Southern farmers in 1887 \$75,000,000 more than in 1886. Need there be any wonder that Southern farmers are in better financial condition than for some years.

Over \$100,000,000 were spent in building and equipping new railroads and improving old roads in the South last year, while the capital and *capital stock* of all new manufacturing and mining companies organized or chartered in the 14 Southern States in 1887 was over \$250,000,000. Who can measure the possibilities of this great country?

THE Anniston Hot Blast shows in a late issue that the two new furnaces now under construction there will consume 1,650 tons of coke, ore and limestone a day, and produce 300 tons of pig iron a day, thus furnishing in the course of a year 670,000 tons of inward and outward freight to the railroads of that place, equal to 33,500 car loads. On the basis of 500 pounds to the bale, these two furnaces will furnish as many pounds of transportation as 2,800,000 bales of cotton, or 40 per cent. of an entire cotton crop. Could any more forcible statement be made to show what the development of the iron interests of the South means to the railroads, to the miners of coal and ore, and, in fact, to every branch of industry. What a vast traffic the 25 furnaces now building in the South will add to Southern railroad business.

Give the Boys a Chance.

At a recent meeting of the board of directors of Girard College, the question of giving greater attention to manual instruction was discussed. The Philadelphia Inquirer reported the proceedings as follows:

President Comegys, of the Philadelphia National Bank, introduced a resolution for increasing the hours given to manual instruction at Girard College. The Hon. Richard Vaux made a speech strongly favoring the resolution which his colleague, the mover, had based upon the usefulness of industrial instruction, the success with which the pupils had been trained in that direction, and the advantage to the boys themselves. Several of the members took part in the debate which followed, the general sentiment favoring the movement, the only question being how it could be done. A motion was made to refer the resolution to the joint Committees on Industrial and Manual Instruction, and the subject was finally made the special order for the next meeting, with the understanding that meantime the joint committee would ascertain how the arrangement could be made practicable and prepare a report to be submitted to the board.

In the Quaker City are many large manufactories that employ a small army of skilled artisans and a very great force of ordinary laborers. She is second only to New York in the diversity of her industries and the capital employed in them. But Philadelphia, like other manufacturing towns in this country, suffers from a cause for which she is seeking a remedy. The labor unions brought from Europe and organized here prevent boys with an aptitude for mechanics from learning the trades to which they are inclined. In former years the English apprentice system existed in most of the States. When boys left school they were bound out for a term of years to those whose business they wished to learn, and acquired a knowledge of details and a skill that made them masters of their craft. They began with the rudiments and were advanced as fast as they became proficient. By far the greater number of successful men of middle age and upwards who are connected with the manufacturing industries of our day served out apprenticeships in their youth. The tyranny of labor unions has destroyed that system. In their narrow selfishness they endeavor to shut out learners, foolishly supposing that by so doing they can control their own time, work and wages. The consequence is that while American boys have great trouble in acquiring a trade, thousands of foreign workmen come to this country, too often to the overstocking of the labor market and the depression of wages. It has become a common occurrence for British and Canadian mechanics to come from home, bringing their tools with them, and work through a busy season when wages are high, going back as soon as business slackens. It is estimated that there are now in New York several thousand masons, house carpenters and painters from Great Britain who will remain on this side of the ocean only while business is brisk. They never bring their families; they live with the closest economy, and they carry home most of their earnings. The

arguments used against the Chinese apply with equal force to these transient workmen. The ranks of those labor unions that prevent American boys from learning trades are swollen with this class of members, who join as soon as they land on our shores, and keep their dues paid up whenever out of the country.

It may be argued that the introduction of labor-saving machinery has done away with the necessity of learning trades; that it is much easier to attend an automaton that accomplishes as much as twenty men than to work like the old-style mechanic, who, a few years ago, would have been one of the twenty. In a sense this is true, but only partly true. Bricks are made by machines, but they must be laid by the hand. Stones are dressed in the same way, but the mason must fit them into the wall. Planers and other machines prepare much of the lumber for buildings, but the skilled hands and educated eyes of the carpenter are needed to fit each piece to its place and make a good job. And so it might be said of all kinds of mechanical industry. The best products of machine work will be spoiled by unskilled after-handling, while the true mechanic will redeem the imperfections of machine-wrought materials and make them serve his purpose well. It is, therefore, essential to the prosperity of our country's industries that such of our youth as are gifted with mechanical instincts should have every chance to use them, and, as they are shut out from learning in the good old way, others must be provided for them. Within a few years this conviction has forced itself upon many communities, which have initiated measures to effect the desired end. In some cities mechanical training for boys has been made a part of the common school course of study. In others night schools of the same kind have been started and are sustained by private liberality. There was no one feature of the splendid educational exhibit which General John Eaton organized for the World's Cotton Exposition at New Orleans that interested all visitors so greatly as that representing the industrial department of the Tulane University, of Louisiana. That room-full of bright lads, absorbed in their work and enthusiastic over it, was daily filled with curious and delighted people, and the excellence of their work showed what our American boys can accomplish when the chance is given them. Girard College is pursuing the Tulane system, and the reported action of the directory of that noble institution indicates that what has been done in that direction has been of such practical value to the students that it is desirable to increase the hours they devote to manual instruction.

This country is to be the theatre of greater progress in the industrial arts than the world has yet known. The advance made during the past twenty-five years, immense as it has been, will seem small when compared with that which shall have been gained when we cross the threshold of the twentieth century. To give it the greater momentum, our American boys must have every facility extended to them that will enable them to participate in the triumphal march that shall place this country in the van of industrial progress and prosperity.

THE SOUTH'S COTTON MILLS.

A Great Increase in Cotton Manufacturing Interests.

Old Mills Enlarging and New Mills Being Built Very Rapidly.

The Views of Southern Cotton Manufacturers As to the Future of this Industry.

That the South, which produces the cotton, is destined to manufacture it, admits of no questioning. The South has the natural advantages necessary for success in this business, and whatever difficulties there may be in the way are easily overcome when practical experience, backed by capital, is brought to bear upon the matter. There may be times of depression, but this will not stop the sure and steady growth of this great industry. Good operatives, it has been said by some, cannot be had in the South, and this section can never hope, so some of our New England friends claim, to do anything more than manufacture coarse goods. But a few years ago the same people were just as ready to claim that cotton manufacturing, even of coarse goods, would never amount to much in the South. Forced now to admit that Southern mills control this branch of the business, they fall back on the threadbare argument against the possibility of the Southern mills ever successfully competing with New England mills on the finer goods. Before many years have passed they will be forced to abandon this. Every cotton mill that goes into operation in the South helps to make more certain the future supremacy of this section in every branch of this industry. With the increase in this business the number of trained operatives increases, and the skill necessary for the production of finer goods will be found ready at hand when the cotton manufacturers of the South decide that the time has come for devoting more attention to fine goods.

It was but a few years ago when the statement that the South would, in time, control the iron market of this country was ridiculed, and the reply made that, while the South might produce a large quantity of low grade pig iron, it could never hope to compete with the North in the fine, finished products of iron and steel, where an abundance of capital and skilled mechanics would enable that section to still control this branch of the business. At first the South demonstrated that it could make pig iron more cheaply than any other part of this country. Having done this, attention was turned to the building of enterprises for producing the finished goods, and Chattanooga's steel rail mill and steel nail mill, Atlanta's saw works, Aniston car wheel and car works, Birmingham's pin and tack factory, and stove foundry, Richmond and Roanoke's locomotive works, and hundreds of kindred enterprises are daily proving that the South can manufacture every variety of fine products from pins and tacks to locomotives and steel rails. As in iron, so will it be in cotton. When the time is ripe, and that time seems to be near at hand, for the South to turn its attention to finer qualities of cotton goods, it will do so, and do it successfully. This point is well stated by Mr. F. P. Toof, of Rockford, Tenn., who writes to the MANUFACTURERS' RECORD as follows:

"We think the time ripe for the South to enter the field on finer numbers of yarn, and that we can make these numbers from 20s to 50s and compete with New England mills is, in writer's opinion, a fact based on a residence in the South for fourteen years; and when this is done Southern manufacturers will be surprised to find that it requires more skill (machinery being equal) to

manufacture the coarser numbers than the finer numbers, the all-important feature being to schedule a plant carefully for the finer counts. So far as Southern labor is concerned, the operatives will be found more skillful on the finer counts than their enemies would give them credit for."

In 1880 the census reported \$207,781,868 invested in cotton manufacture in the United States, and the consumption of cotton by American mills 1,570,342 bales, or less than one-fourth of an average crop. On this basis it would require an investment of over \$800,000,000 in mills to consume our entire cotton crop, so we can form some idea of what the magnitude of the cotton manufacturing interests is. Out of an estimated total of 77,110,000 spindles in the world, the United States has only about 13,000,000. Great Britain having over one-half, or 42,000,000.

The MANUFACTURERS' RECORD has compiled, through special reports from cotton mills in the South, a list of all the mills in that section, with the number of spindles and looms in each; and, comparing these figures with the reports of the census of 1880, we have the following interesting table:

Number of Cotton Mills, Spindles and Looms in the South January, 1888, compiled by the MANUFACTURERS' RECORD, compared with the number on May 31, 1880, as given in the United States Census Reports.

States.	January, 1888.			May, 1880.		
	No. of Mills.	No. of Spindles.	No. of Looms.	No. of Mills.	No. of Spindles.	No. of Looms.
Alabama.....	20	114,540	2,324	15	55,072	1,060
Arkansas.....	3	6,400	52	2	2,013	28
Florida.....	1	816	...	1	816	...
Georgia.....	38	390,440	9,007	41	200,974	4,713
Kentucky.....	5	31,500	605	3	9,022	73
Louisiana.....	5	38,068	1,044	2	6,097	190
Maryland.....	20	175,550	2,963	20	125,014	2,325
Mississippi.....	10	52,844	1,296	6	26,172	704
North Carolina.....	91	250,854	5,929	49	102,767	1,960
South Carolina.....	34	248,136	5,734	15	92,788	1,776
Tennessee.....	31	110,054	2,614	15	46,268	1,068
Texas.....	3	5,494	122	2	2,648	71
Virginia.....	13	69,649	2,314	7	44,335	1,324
Total.....	294	1,495,145	34,006	179	713,989	15,222

These figures show an increase of over 100 per cent. in the number of spindles and looms in the South since 1880. From 179 mills having 713,989 spindles and 15,222 looms in 1880 this industry has increased until there are now 294 mills with 1,495,145 spindles and 34,006 looms in the South. As remarkable as is this increase, these figures really do not fully represent the development of this business, for they do not include the spindles and looms of the new mills now under construction, such as those at Pelzer, Clifton, Pacolet, &c. The number of spindles and looms to be placed in these mills is given in our list of cotton mills, but is not included in the totals. The mills now under construction, and those for which the money has been secured and upon which work will shortly be commenced, and the additions to the plants of old mills, will require, as shown by our reports, 242,000 spindles and 4,800 looms. Thus by the end of 1888 the South will have in operation about 1,736,000 spindles and 38,800 looms. The increase of over 100 per cent. in the number of spindles and looms in the South is especially noticeable when it is remembered that the increase in the rest of the country during the same time has only been about 20 per cent.

The table given above shows that in the number of spindles and looms Georgia leads far ahead of any other Southern State, having 390,440 of the former and 9,007 of the latter, while North Carolina is first in the number of mills, and second in the number of spindles, though the percentage of increase in that State as well as in South Carolina is greater than in Georgia. The two Carolinas are pressing each other very closely, but when the four or five large mills at Pelzer, Pacolet, Clifton and Piedmont are completed South Carolina will probably outrank the Old North State, as the former will then have about 300,000 spindles. As often noted before, South Carolina builds large mills, while North Carolina has for years built small mills, but many of them. Thus South Carolina's 34 mills have 248,136 spindles and 5,734

looms, against 250,854 spindles and 5,929 looms in the 91 mills in North Carolina. Alabama and Tennessee have more than doubled the number of spindles and looms, but both together have less than South Carolina. Maryland has made a considerable increase in the number of spindles, but no increase in the number of mills. The other States have made very heavy percentages of increase, but the total of their cotton mill industry is still small. Texas, though it produces about 1,500,000 bales of cotton, has practically no cotton manufacturing business. Considerable efforts have been made to build mills there, and a 10,000 spindle mill is now under construction at Dallas, while a good many others are projected. It would seem that no State in the South offered better opportunities for cotton manufacturing than Texas. Alabama, which has displayed such wonderful enterprise in developing her iron interests, has given but little attention to cotton manufacturing, and has less than one-third as many spindles and looms as her neighbor, Georgia.

The reports from the cotton mills show that the aggregate value of the product of all Southern mills in 1887 was about \$43,000,000, against \$21,000,000 in 1880.

The importance of developing this industry cannot be too strongly stated. It retains at home the great wealth produced in manufacturing the South's leading staple. As already shown, on the basis of the capital invested and the bales of cotton consumed in American mills in 1880, an investment of \$800,000,000 would be required to manufacture the entire cotton crop of this country. Instead of selling for about \$300,000,000 a year, as the cotton crop now does, it would, if wholly manufactured in the South, represent about \$1,000,000,000 a year. Cotton mills furnish employment to a large class of hands that must remain idle for lack of work to do, except as this business grows. In every town and city of the South there are hundreds and in some, thousands of white women and girls anxious to work, but there is no work for them. Given employment at cotton manufacturing, in which they readily become expert, they are enabled to support themselves, and thus to add greatly to the wealth of the community. Mr. John Hill has estimated that, in establishing a cotton mill in the South, at least 80 or 90 per cent. of the operatives are people who before had been unemployed, and hence added nothing to the productive or wealth-creating power of the State. They were idlers not from choice, but from force of circumstances—a drain on others, while now they are self supporting. This is one of the great blessings which the development of cotton manufactures brings to the South.

One of the fruitful causes of trouble with many Southern cotton mills is the selling of their goods through Eastern commission houses. As the Southern farmer, who from lack of capital mortgages his crop in advance and buys his home and farm supplies on credit at an advance of from 50 to 100 per cent. over cash prices, can scarcely hope to get out of the control of his factor except through some fortunately good crop, that may place him out of debt and give him a fresh start, so the Southern cotton mill, that, because of lack of working capital or for other reasons, is in the control of its commission house, is apt to find that its profits are a good deal smaller than those of the mill which is free from such entangling alliances. The commission agent, of course, must have his full commission on goods sold, and his commission on money advanced, and naturally he is more inclined to favor the buyer than the seller. He controls, through the power of money, the sale of the goods, and, willingly or unwillingly, the mill must ship its product to him as rapidly as made, because money is needed to carry on operations.

Knowing that he has this control over the sale of the goods, the agent very naturally feels more inclined to favor the purchaser, whom he does not control, than the mill, which he does. Many complaints have been made of the workings of this system, and it has been claimed that every mill that has failed in the South is one whose goods were handled by commission houses. This is a strong statement, and one that, if true, shows that this system is a very faulty one. We do not believe that Southern help has been the cause of failures, for good operatives can be had,—at least, that is the experience of most mills,—and where failures are attributed to inefficient help there is, we think, some other reason at the bottom of the matter. In the case of the Charleston mill which, after a disastrous career, has been forced to give up and be offered for sale, the cause has been attributed to inefficient help, and yet there are many other great mills in that State, the Pelzer, Pacolet, Clifton, Camperdown and numerous others, which have prospered year after year. It would seem that, instead of being inefficient operatives, there must have been some other cause to help on the trouble. Whether the mill paid too much for salaries, whether it lacked management that could produce goods at the lowest prices and sell them at the highest, or whether a lack of adequate working capital forced its goods on unfavorable markets, and kept it a constant borrower, or whether it was a combination of all, we do not positively know, but we cannot see how such a mill could fail entirely through inability to secure good operatives, while other mills throughout the South make no such complaint. We would be glad to have the views of Southern cotton mill managers on these various subjects.

We give the following reports from cotton manufacturers as to the outlook for this business.

W. L. Dolphyn, superintendent Adams Cotton Mills, Montgomery, Ala.: "Writer raised in north of England mills, Oldham district; have been South seven years nearly; can honestly say that the South is undoubtedly and unquestionably forging ahead. The native white is taking more kindly to factory life, and have begun to show interest in work. When I was in England last fall a large manufacturer expressed the opinion that there was nothing to impede the Southern States from running away with the Northern States' trade and the coarser brands of English make, and eventually be educated to manufacture finer grades. The South must and will be successful."

Muscogee Mfg. Co., Columbus, Ga.: "The cotton manufacturing industry of the South is bound to win."

G. W. Hamilton, Crown Cotton Mills, Dalton, Ga.: "Think cotton manufacturing in the South is in its infancy. All that is wanted is more capital. Our mills are making money, and adding to their machinery from earnings. Few things pay better in the South than well-managed cotton mills. Climate mild and healthy, labor cheap, raw material from first hands, fuel cheap, and freight rates very reasonable."

J. P. Verdery, president Enterprise Mfg. Co., Augusta, Ga.: "The advantages of cotton manufacture in the South are such that, in my judgment, this industry will develop more rapidly here than in any other section of the United States."

Jas. N. Williamson, proprietor Oasipee Cotton Mills, Gibsonville, N. C.: "Can't say anything about the future of the cotton manufacturing industry outside the plaid line, but can say of that that the thing is about to be overdone. There is too much of a tendency in one direction and on one class of goods."

J. S. Ragsdale, agent Oakdale Mfg. Co., Jamestown, N. C.: "The manufacturing in the South is bound to go forward. Opposition and poor trade may retard, but cannot check it much."

Lawrence S. Holt, proprietor Aurora Cotton Mills, Burlington, N. C.: "I do not know much except my own business, and I feel very sure there are now too many mills on cotton checks and plaids weighing 4½ to 5 yards to pound."

Empire Plaid Mills, High Point, N. C.: "Several new mills are being built now and to be built during this year, and if they all go in the old rut as heretofore, that is, to

make what their neighbors make, then this class of goods will be overproduced. Heavy sheeting and plaids seem to be the order, while there is enough made now to fully supply the demand and make trade rather tame. We do not see where the product of the new mills will go—unless we can export."

E. C. Gambrell, superintendent Blue Ridge Mfg. Co., Petersburg, Va.: "There is no question about the South being the place for future manufacturing. We see it every week. Petersburg has nearly every advantage required. Healthy, climate very good, labor good and cheap, every advantage in freight, living cheap, fair cotton market for numbers fine as 20s. We have a good building and power, and an excellent chance for one wishing to start a small yarn mill of two to three thousand spindles. Colored labor at 50 per cent. of white cost; when taught just as good."

Miller, Blanton & Oates, proprietors of Belmont Cotton Mills, Shelby, N. C.: "There will be a number of new mills built in this State this year, stimulated by the present prosperous condition of cotton manufacturing."

Phifer & Smith, Elm Grove Mill, Lincolnton, N. C.: "New mills continue to be built in great numbers in our vicinity, and all seem to be doing a prosperous business. Every community, nearly, has one or more mills either in operation or contemplation, and we do not know what the mania will lead to unless checked very soon."

H. P. Hammett, president Piedmont Manufacturing Co., Piedmont S. C.: "I think the prospect is favorable. The danger is in building too many new mills to be operated by inexperienced managers, and they will not all succeed."

B. D. Fry, president Marshall Mfg. Co., Manchester, Va.: "From the number of mills in contemplation cotton manufacturing seems likely to be overdone."

The Huguenot Mills, Greenville, S. C.: "It is only a question of time when the South will rule the market on manufacturing goods. New England can't touch us now on coarse goods, and they are sold at shortest profits. In 25 or 30 years Southern labor will have improved and inherited talents for manufacturing; then watch out for finer goods."

A. Dahlgreen, treasurer The National Mfg. Co., Nashville, Tenn.: "Cotton manufacture is now no experiment South. It is merely a question of judgment, vim and capital. Mills with modern machinery South, with as good management as they would have East, will pay better South than East (if not crippled by lack of capital). In other words, if intelligent advantage is taken of the resources, climate, location, etc., in the South, the results will beat those East. But these advantages will not do it all; and the South makes a grave error in supposing they will. Mills South fitted up with old machinery picked from the junk pile will fail every time."

Schenck, Ramsaur & Co., proprietors Cleveland Cotton Mills, Cleveland Mills, N. C.: "If mills are increased throughout the South, as they are likely to be in Western North Carolina in the next twelve months, we fear an overproduction of such goods as are usually made in Southern mills."

J. C. Shepard, superintendent Port Gibson Cotton Mill Co., Port Gibson, Miss.: "Southern cotton manufacturing is somewhat like the Western stock business—they sell their best steers to go to New England and Europe; we sell our best cotton to the same markets, and use the poorest grades at home. Others have the best beef and the best cotton, while we have to use the poor stock at home. A practical knowledge of the staple goes a long way toward making a dividend. My observation has led me to think that more money is thrown away by incompetent buying than by any loss that may occur in its manipulation. Good cotton and good carding, after it has been bought for its value, will make it a success financially, especially in the South, where we have dampness, cheap help and cheap living."

Broad River Mills, Cleveland Co., N. C.: "The prospects for the manufacture of cotton in the South are very bright."

Fall Mills, Allen's Factory, Ala.: "We think the South is the place for the manufacturing."

Trion Mfg. Co., Trion Factory, Ga.: "Think the future encouraging for some years to come. Think the hard time has been passed for a while."

Hutchison Mfg. Co., Banning, Ga.: "We anticipate a prosperous future for Southern manufacturers, as the demand for cotton goods is greater than for several years past, and at good prices."

Cherokee Mill's Co., Mobile, Ala.: "The South is the place to manufacture cotton goods; but I think our section is running too much on coarse goods, and should begin to do finer work."

J. S. Solomon, proprietor East Mississippi Cotton Mills, Meridian, Miss.: "I look upon the cotton manufacturing in the South as still in its infancy, and upon the energy and enterprise of our people depends its future. Owing to small profits, and in some instances even loss, we retrograded three or four years ago, but are now recuperating from those effects, and prospects are much brighter. The manufacturers are taking more interest in placing in their factories new and labor-saving machinery, and using such rigid economy that, in few years, the cotton manufacturing industry in the South will be increased considerably."

Mt. Pleasant Mfg. Co., Mt. Pleasant, N. C.: "If our protective tariff is continued the South will continue to prosper; but should Congress see fit to give us free trade we fear the industries of the South would languish."

Rocky Mount Mills, Rocky Mount, N. C.: "The making of warps and yarns for the year 1887 has been profitable, and a bright outlook for 1888."

Charles Estes, president The John P. King Mfg. Co., Augusta, Ga.: "The outlook is now favorable, and likely to continue so for some time, provided our people do not build so many mills as to produce more than needed, which they are quite likely to do."

Jno. T. Bellamy, proprietor Tuscarora Cotton Mills, Enfield, N. C.: "I believe that all large mills, and some small ones, with plenty capital, are a profitable investment, and that most of cotton spinning will eventually be done in the South. But to be profitable must have funds sufficient to take advantage of raw cotton markets and not force sale of products, and dispense with middle men and their exorbitant commissions."

Hon. Rufus B. Bullock, president Atlanta Cotton Mills, Atlanta, Ga.: "If the internal revenue laws are repealed, and tariff adjusted with a view of protecting American labor and American raw materials, our industries will increase 25 per cent. during 1888."

W. E. McCoy, Riverside Mills, Augusta, Ga.: "There is no doubt there will be a very considerable increase in cotton manufacturing in the South this year, but unless the new enterprises get out of the beaten track and produce goods not as yet made in the South, I fear the production will soon exceed the demand, permitting buyers to dictate their own prices, and the new mills not only fail themselves to make money but force the mills now in operation to sell at lower prices, and in the end prove disastrous to all of them. There is a certain demand for heavy goods; it is by no means unlimited, and to my mind the Southern mills are about supplying it, as there are few mills North and East on these goods. If the present looms are producing all that is required, it will be dangerous to increase the production. If the mills now in contemplation will produce goods now made North and East, and not do as most of these mills in the past decade—follow in the footsteps of their neighbors—it will be far better for all concerned in this section. Of course, this is only the opinion of the writer."

W. J. Kincaid, president The Griffin Mill, Griffin, Ga.: "I regard cotton manufacturing in its infancy in the South. In my opinion all staples will be made here before many years; not only for the United States, but for Mexico and South America. Under favorable circumstances we can, and should, supply all countries with heavy cotton goods."

Pee Dee Mfg. Co., Rockingham, N. C.: "We are apprehensive that the vain glory of some of the Southern mills in publishing their profits may have the tendency to induce undue investments and destroy the margin which exists by overproduction. In the heavier cotton goods the South can defy competition, and, in our opinion, it will not be a great many years before the bulk of this class will be made in our section. Indeed, we can make them more cheaply than it can be done in Europe. For this reason the existing tariff is not worth anything to us. We have none but domestic competition, and would not have if all impost tax were removed. We are not believers in what is called 'protection to American labor'—being, in fact, a burden to American capital. Our capital stock is \$125,000. We make plaids and, when there is a temptation, spin warps for the market. We sell our goods chiefly to jobbers and converters. Our chief markets are Charleston and Wilmington and New York. One-half of our operatives live in their own houses. We support a school, where free tuition is given to the children of our employes. Water is our motive power. In 1887 the mill was in operation 309 days; we have not lost an hour by either high or low water, or ice. The location is one mile from the railway station. We work eleven hours daily, but would be glad if the time was shortened to ten hours."

Joseph H. Wilson, manufacturer of cotton yarns, Lowell, N. C.: "My opinion as to the cotton manufac-

turing industry in the South is that it is now in its infancy, and is destined at no distant day to develop into gigantic proportions, and this industry begets a train in its company. We formerly invested money in negroes, and since the war have been putting surplus money in banks; but now the interest is too low for a heavy profit, and as cotton manufacturing has been remunerative to those generally who had good mills and managed well, the people of means everywhere throughout the South are talking manufacturing of one kind and another, and cotton weaving and spinning seem to lead. Four new concerns were recently projected in Charlotte, and one at Gastonia, N. C. In fact, everybody now wants to get into a cotton mill of some sort. This will call for machinery, supplies of all kinds for the mill and operatives, and will give rise and encouragement to many other pursuits. The want of means is about the only impediment, and that will slowly give way to the frugal accumulations of an industrious and thrifty population. This manufacturing at home means Liverpool or highest prices for cotton, and right into the hands of the producers with nothing cut off in the way of freight, commissions and the innumerable other slices which the middle men get for handling the crop. It also means that the farmers will have a home demand for almost all that can be raised on his land at paying prices; whereas, previously, he had no market at all. As this increases the farmer's profits, it means higher prices for land and labor, education to his children, churches, school-houses, denser population, better roads, and all the advantages of a highly educated and intelligent population, imbued with honor, enterprise and ambition."

Sumter Cotton Mills, Sumter, S. C.: "We see no reason why manufacturing should not gradually increase in this section. Our climate is good and healthy, living moderate, and labor abundant and satisfied."

O. S. Porter, Covington, Ga.: "When run by water, water power being so cheap, a mill—cotton mill—if at all well managed, will pay in Middle Georgia."

Clifton Mfg. Co., Clifton, S. C.: "We are building a new mill at this place to contain 19,600 spindles and 600 looms; expect to have same ready for starting up November next." [This will give Clifton Mill 42,672 spindles and 1,142 looms.—ED. MANUFACTURERS' RECORD.]

J. M. Worth Mfg. Co., Worthville, N. C.: "The manufacture of white goods is now paying handsomely. The plaid business is vastly overdone, and is not paying."

Cumberland Mills, Cumberland, N. C.: "On account of the large number of new mills being built South we think there will be a necessity for some of the mills going on a new class of goods, to prevent an over production. The plaid business in this State has almost reached this point now."

Sylvan Mills, Shelbyville, Tenn.: "The Southern mills are on a more prosperous basis now than for the past several years. Most all mills are sold ahead, but there is an end to all things and probably soon the supply will catch up with the demand, and then a period of lower prices and smaller dividends will prevail. The heavy demand, caused by short stocks, has stimulated production to such an extent that before a great while the deficiency will be in the demand and not, as now, in the supply."

J. B. Goodwin, secretary and treasurer Anniston Mfg. Co., Anniston, Ala.: "The future looks moderately bright."

We give a list of all cotton mills in the South, with the number of spindles and looms in each. Mills that are marked "building" and "proposed" are not included in the totals:

Location.	Name of Company or Firm.	No. of Spindles.	No. of Looms.
Allens Factory	Falls Mfg. Co.	1,400	380
Anniston	Anniston Mfg. Co.	11,500	61
Autaugaville	Autaugaville Factory	19,000	3,216
Bell Factory	The Bell Factory	3,216	900
Chattahoochee River	Alabama & Georgia Mfg. Co.	7,000	300
Cottontale	West Point Mfg. Co.	12,000	300
Decatur		Projected.	
Florence	Alabama Land & Mfg. Co.	3,000	60
Florence	Embery, Son & Young	2,000	
Huntsville	Huntsville Cotton Mill Co.	10,048	
Mobile	Cherokee Mills Co.	1,200	
Mobile	Sibley Mills	1,500	
Montgomery	Adams Cotton Mills	3,000	96
Mountain Mills	W. H. Cherry & Co.	5,600	
Prattville	Prattville Cotton Mills	5,000	128
Rock Mills	Rosedale Mfg. Co.	5,000	74
Selma	Matthews Cotton Mills Co.	10,216	261
Spring Garden	Hurricane Creek Mfg. Co.	1,000	
Tallapoosa	Tallapoosa Falls Mfg. Co.	19,000	330
Tuscaloosa	Tuscaloosa Cotton Mills	178	
Tuscaloosa	Tuscaloosa Mfg. Co.	7,500	240
Tuscaloosa	Tuscaloosa Yarn & Rope Mills	3,000	
Total, 27 mills		114,540	2,324

* P. O., West Point, Ga.

Location.	Name of Company or Firm.	No. of Spindles.	No. of Looms.
Arkadelphia	Arkadelphia Cotton Mills	Proposed.	
Fordyce	G. M. Hampton and others	Proposed.	
Fort Smith		Proposed.	

Location.	Name of Company or Firm.	No. of Spindles.	No. of Looms.
Little Rock	Quapaw Cotton Mills Co.	1,800	330
Murfreesboro	Arkansas Mfg. Co.	1,100	57
Macon Springs	Man. Sp. Imp. & Water Power Co.	Proposed.	
Russellville	Meirone Cotton Mills Co.	2,500	
Total, 3 mills		6,400	387

Florida.

Location.	Name of Company or Firm.	No. of Spindles.	No. of Looms.
Tallahassee	Tallahassee Mfg. Co.	816	
De Funiak Springs	De Funiak Wool & Cotton Mfg. Co.	Proposed.	
Total, 1 mill		816	

Georgia.

Location.	Name of Company or Firm.	No. of Spindles.	No. of Looms.
Americus	Muskeles Mfg. Co.	Proposed.	
Athens	Athens Mfg. Co.	10,000	330
Athens	Georgia Mfg. Co.	5,120	96
Athens	Princeton Factory	3,508	100
Athens	Bloomfield Water Power Co.	7,500	
Atlanta	Atlanta Cotton Mills	11,000	350
Atlanta	Exposition Cotton Mills	16,000	480
Atlanta	Fulton Cotton Spinning Co.	12,500	500
Augusta	Augusta Factory	26,750	803
Augusta	Enterprise Mfg. Co.	26,000	648
Augusta	Globe Cotton Mills	7,500	
Augusta	John P. King Mfg. Co.	29,234	880
Augusta	Riverside Mills	2,400	
Augusta	Shamrock Mills	2,500	
Augusta	Sibley Mfg. Co.	35,136	900
Augusta	Algeron Mills	4,000	150
Augusta	Dar-mouth Spinning Co.	11,000	
Banning	Hitchcock Mfg. Co.	4,950	86
Chapel Hill	Anawakee Factory	800	
Clarksville	Porter Mfg. Co.	5,500	
Columbus	Clegg Mfg. Co.	110	
Columbus	Columbus Mfg. Co.	1	
Columbus	Eagle & Phenix Mfg. Co.	46,800	1,500
Columbus	Steam Cotton Mills	4,000	
Columbus	Swift Mfg. Co.	8,000	330
Columbus	Muskeles Mfg. Co.	8,000	408
Columbus	H. Howard		
Columbus	Mitchell & Co.		
Columbus	T. J. Pearce	50	
Covington	O. S. Porter	2,200	
Cuthbert	Randolph Mfg. Co.	2,520	
Dalton	Crown Cotton Mills	4,000	100
Gainesville	Gainesville Cotton Mfg. Co.	1,128	
Griffin	Griffin Mfg. Co.	5,000	160
High Shoals	New High Shoals Mfg. Co.	5,500	80
Jasper	W. C. & J. T. Atherton		
Jewells	Bowen, Jewell & Co.	3,336	100
La Grange	Troup Factory	1,600	52
Macon	Bibb Mfg. Co.	18,000	
Macon	Powell's Mills	14,000	
Newman	Wilcox Mfg. Co.	2,000	
Newman	R. D. Cole, Sr., President	Proposed.	
Parola	Oglethorpe Mfg. Co.	4,000	
Park's Store	Shick Creek Cotton Factory	720	
Perry	Houston Factory	2,800	60
Quitman	Quitman Mills	1,856	16
Raccoon Mills	Raccoon Mfg. Co.	3,500	104
Reynolds	Elmira Cotton Mills	1,500	36
Richmond	Richmond Factory	3,000	
Rome	Rome Cotton Factory	3,000	8
Roswell	Roswell Mfg. Co.	9,000	
Roswell	Willow Creek Cotton Mills	1,300	
Savannah	Arkwright Cotton Mills	1,000	
Sparta	Montour Factory	1,120	
Thomasville	Finch River Factory	3,000	
Too Nigh	Jas. A. Atherton	800	
Trion Factory	Trion Mfg. Co.	8,456	258
Waleska	E. A. Fincher	576	
Waymanville	Wayman Factory	3,300	64
Total, 58 mills		390,440	9,007

Kentucky.

Location.	Name of Company or Firm.	No. of Spindles.	No. of Looms.
Grahamton	Grahamton Mfg. Co.	2,500	61
Henderson	Henderson Cotton Mills	21,000	544
Louisville	Kentucky Warp Co.		
Louisville	Wm. Hadfield		
Maysville	January & Wood	8,000	
Total, 5 mills		31,500	605

Louisiana.

Location.	Name of Company or Firm.	No. of Spindles.	No. of Looms.
Baton Rouge	Baton Rouge Yarn Co.	8,400	300
New Orleans	Lane Mills	10,168	324
New Orleans	Orleans Oil & Mfg. Co.	3,400	60
New Orleans	Maginias Cotton Mills	17,000	460
New Orleans	New Orleans Cot. Rope & Mfg. Co.		
Total, 5 mills		38,968	1,044

Maryland.

Location.	Name of Company or Firm.	No. of Spindles.	No. of Looms.
Albertain	Albertain Cotton Mills	12,000	
Baltimore	Woodberry Mfg. Co.	35,400	325
Baltimore	Mt. Vernon Co.	40,000	480
Baltimore	Wm. J. Hooper & Co.	Twine, &c.	
Baltimore	J. S. Johnson & Co.	Twine, &c.	
Baltimore	Druid Mills Mfg. Co.	13,000	170
Baltimore	Ashland Mfg. Co.	3,000	
Baltimore	A. Green & Co.	1,400	
Ellicott City	Gray Mfg. Co.	4,000	100
Ellicott City, (near)	Patapasco Factory	5,250	140
Guilford	Jas. S. Gary & Son	1,800	48
Ilchester P. O.	Thistle Mills	7,000	250
Laurel	The Laurel Mfg. Co.	10,000	236
Oella	ella Mills	19,000	325
Phoenix	Phoenix Mills	6,000	150
Powhatan	Powhatan Mfg. Co.	4,000	180
Savage	Savage Factory	10,000	275
Upper Falls	Franklinville Duck Mills	2,500	40
Warren	Warren Mfg. Co.	6,000	160
Total, 19 mills		172,300	2,823

Mississippi.

Location.	Name of Company or Firm.	No. of Spindles.	No. of Looms.
Columbus	Tombigbee Mills	4,596	120
Enterprise	Stonewall Mfg. Co.	6,000	188
Hahogua	W. J. Hubbard & Co.	1,400	40
Meridian	East Mississippi Cotton Mills	2,500	50
Natchez	Natchez Cotton Mill Co.	11,408	320
Natchez	Rosale Yarn Mills Co.	6,500	160
Natchez	N. L. Carpenter & Son		
Port Gibson	Port Gibson Cotton Mill	4,200	108
Water Valley	Yocoma Mills	5,000	
Wesson	Mississippi Mills	11,000	280
Total, 10 mills		52,844	1,296

North Carolina.

Location.	Name of Company or Firm.	No. of Spindles.	No. of Looms.
Ashville	C. E. Graham Mfg. Co.	3,596	200
Big Falls	Big Falls Cotton Mills	5,500	
Burlington	Altamahaw Cotton Mills	2,128	100
Burlington	Altamahaw Cotton Mills	1,200	100
Burlington	Aurora Cotton Mills	2,120	184
Burlington	E. M. Holt Plaid Mills	2,400	140
Burlington	W. E. & J. H. Holt	3,120	186
Byrums	J. M. Odell Mfg. Co.	3,000	
Cedar Falls	Cedar Falls Mfg. Co.	3,618	60
Central Falls	Central Mfg. Co.	2,800	36
Charlotte	Charlotte Cotton Mills	6,800	
Charlotte	Co-operative Mfg. Co.	Proposed.	
Charlotte	Charlotte Mfg. Co.	Proposed.	
Charlotte	Enterprise Mfg. Co.	Proposed.	
Cleveland	Cleveland Cotton Mills Co.	13,000	

Location.	Name of Company or Firm.	No. of Spindles.	No. of Looms.
Cleveland Mills	Cleveland Cotton Mills	1,186	
Coderidge	Enterprise Mfg. Co.	800	14
Columbia Factory	Columbia Mfg. Co.	4,340	396
Concord	Lore Mills Co.	1,000	
Concord	Cannon Mfg. Co.	7,000	
Concord	Odell Mfg. Co.	6,000	336
Cumberland	Cumberland Mills	4,300	75
Davidson College	Stough, Cornelius & Co.	Proposed.	
Double Shoal	E. A. Morgan & Co.	1,100	
Durham	Durham Cotton Mfg. Co.	8,568	200
Durham	Morrison, Gaither & Co.	500	
Elizabeth City	Fowler Net & Twine Factory	200	
Elkin	Elkin Mfg. Co.	1,200	
Enfield	John T. Bellamy	1,500	
Fayetteville	Malloy & Morgan	Proposed.	
Fayetteville	Heaver Creek and Bluff Mills	3,500	67
Fount's Mills	Mfg. Co.	800	14
Franklinville	Enterprise Mfg. Co.	2,300	20
Franklinville	Randolph Mfg. Co.	1,800	30
Gastonia	Gastonia Mfg. Co.	1,800	
Gatesville	Walton, Cowper & Co.		
Gibsonville	Osprey Cotton Mills	3,200	160
Graham	Alamance Factory	1,900	94
Graham	Belmont Cotton Mills	2,502	126
Graham	J. H. & W. E. Holt & Co.	3,000	54
Graham	Oneida Cotton Mills	3,640	203
Graham	Scott, Donnell & Scott		
Granite	Granite Falls Mfg. Co.		
Greensboro	A. C. Burgess & Co.	Proposed.	
Haw River	Falls of Neuse Mfg. Co.	2,240	150
Haw River	Thos. M. Holt	8,474	434
Henrietta	Henrietta Mills	7,120	
High Point	Empire Plaid Mills		
Holman's Mills	Holman Mfg. Co.	1,100	
Hope Mills	Hope Mills Mfg. Co.	5,508	110
Jamestown	Oxale Mfg. Co.	4,800	
Laurel	J. F. Jones	650	
Laurel Hill	Malloy & Morgan	2,500	
Leaksville	Leaksville Cotton Mills	3,620	83
Lexington	Wenonah Cotton Mills	3,324	160
Liberty	Mt. Pleasant Mfg. Co.	1,728	101
Lincolnton	Daniel Rhyme & Co.	1,000	
Lincolnton	Elm Grove Mill	3,000	
Lowell	Normandy Mills	7,000	45
Maiden	Wilson Cotton Mills	5,200	
Maiden	H. F. Carpenter, Sons & Co.	1,800	
Manchester	Manchester Mills Co.	2,000	55
McAdenville	McAdenville Mills	15,000	320
Milledgeville	Yadkin Falls Mfg. Co.	5,000	
Monbo	Long Island Mills	720	
Monbo	Monbo Plaid Mills	1,056	46
Monroe	W. J. Boykin and others	Proposed.	
Mountain Island	Mountain Island Mills	6,400	100
Mount Holly	Tuckasee Mfg. Co.	2,650	
Mount Airy	Alpine Cotton and Woolen Mill	1,500	35
Mt. Airy	Hamburg Mills	870	
Mt. Airy	J. F. & W. A. Moore	864	21
Mt. Airy	A. J. Thompson	960	34
Mt. Holly	T. A. Rhyme & Co.	2,000	
Newton	Newton Cotton Mills	3,040	
Nicholson's Mills	Pee Dee Mfg. Co.	328	
Orange Factory	Willard Mfg. Co.	2,000	75
Patterson	Gwyn-Harper Mfg. Co.	2,000	68
Randleman	Powhatan Mfg. Co.		
Randleman	Naomi Falls Mfg. Co.	5,000	800
Randleman	Randleman Mfg. Co.	5,888	226
Rockingham	Great Falls Mfg. Co.	4,200	134
Rockingham	Lak. Wall & McRae	2,000	
Rockingham	T. B. & J. S. Ledbetter	1,000	
Rockingham	Free Loom Mfg. Co.	4,000	164
Rockingham	Roberts Mfg. Co.	2,800	250
Rocky Mount	Rocky Mount Mills	4,112	
Salem	F. & H. Fries	3,600	135
Salisbury	Salisbury Cotton Mills		
Salisbury	Sapona Cotton Mills	13,000	
Saxapahaw	White, Williamson & Co.	4,000	
Shelby	Miller, Blanton & Oates	3,100	
Shelby	Morgan, Cline & Co.	2,000	
Statesville	J. P. Cal well and others	Proposed.	
Taylorville	Taylorville Cotton Mills	780	24
Turnersburg	W. Turner & Co.	1,802	
Wilmington	Wilmington Cotton Mills	5,712	160
Wilson	Wilson Cotton Mills	5,124	
Worthville	John M. Worth Mfg. Co.	4,000	180
Total, 91 mills		250,854	5,629

South Carolina.

South Carolina.			
Arlington.....	Arlington Mfg. Co.....	1,800	20
Auton.....	Pendleton Mfg. Co.....	2,600	..
Black's Station.....	Cherokee Falls Mfg. Co.....	4,032	..
Charleston.....	Charleston Mfg. Co.....	21,000	464
Clifton.....	Clifton Mfg. Co.....	23,072	512
Clifton.....	Clifton Mfg. Co., new mill.....	119,600	600
Columbia.....	Columbia Mills.....	Proposed.	..
Crawfordsville.....	Morgan Bros. & Co.....	1,076	20
Darlington.....	Darlington Mfg. Co.....	8,006	280
Due West.....	Prof. J. P. Kennedy.....	Proposed.	..
Enoree.....	Enoree Mfg. Co.....	5,480	..
Fork Shoals.....	Fork Shoal Cotton Mill.....	2,490	..
Fort Mill.....	Fort Mill Mfg. Co.....	2,000	200
Glendale.....	Glendale Mill.....	4,600	136
Graniteville.....	Graniteville Mfg. Co., 2 mills.....	30,308	961
Greenville, (new).....	Batesville Mfg. Co.....	2,288	..
Greenville.....	Campdenon Mills.....	11,056	..
Greenville.....	Huguenot Mills.....	2,000	185
Greenville.....	Lannew Mfg. Co.....	1,300	..
Greenwood.....	W. H. Pearce.....	Proposed.	..
Honea Path.....	A. J. Sutton.....	Proposed.	..
Langley.....	Langley Mfg. Co.....	12,682	370
Longwood.....	Longwood Mfg. Co., 2 mills.....	2,418	100
N.C. Mills.....	Mapleson Cotton Mills.....	4,000	..
Newberry.....	Newberry Cotton Mills.....	10,112	300
Orangeburg.....	Geo. H. Cornelison.....	5,000	..
Pacolet.....	Pacolet Mfg. Co.....	12,000	300
Pacolet.....	Pacolet Mfg. Co., new mill.....	114,000	370
Pelham.....	Pelham Mills.....	3,000	..
Pelzer.....	Pelzer Mfg. Co.....	30,000	1,052
Piedmont.....	Piedmont Mfg. Co.....	14,000	568
Piedmont.....	Piedmont Mfg. Co., 2 mills.....	4,000	131
Richburg.....	Cedar Shoals Mfg. Co.....	900	..
Richburg.....	Fishing Creek Mfg. Co.....	5,000	..
Rock Hill.....	Rock Hill Cotton Factory.....	7,604	..
Sumter.....	Sumter Cotton Mills.....	2,700	..
Union.....	Union Mills.....	Proposed.	..
Valley Falls.....	Valley Falls Mills.....	576	6
White Pond.....	Maverick Mills Co.....	4,000	60

Location.	Name of Company or Firm.	No. of Spindles.	No. of Looms.
Nashville.....	Nashville Cotton Mills.....	12,000	204
Nashville.....	National Mfg. Co.....	6,000	199
Nashville.....	Tennessee Mfg. Co.....	35,000	1,016
Oregon.....	Henry Warren & Son.....	854	16
Paris.....	J. T. Currier & Co.....	1,160	.....
Paris.....	Hudson, White & Co.....	1,480	.....
Pine Wood.....	S. L. Graham & Son.....	2,416	44
Rockford.....	Rockford Cotton Mills.....	2,800	.....
Shelbyville.....	Sylvan Mills.....	3,720	104
Trenton.....	Trenton Cotton Mills.....	3,500	85
Vale Mills.....	Vale Mills.....	1,450	.....
Total, 31 mills.....		420,854	2,365

Texas.			
Cuero.....	Excelsior Mfg. Co.....	1,030	16
Corsicana.....	W. N. Kenner.....	Proposed.	.....
Corsicana.....	Central Texas Co-operative Ass'n.	Proposed.	.....
Dallas.....	Dallas Cotton & Woolen Mills.....	110,000	200
Dallas.....	Dallas Co. Alliance Building & Mfg. Co.....	Proposed.	.....
Denison.....	Denison Cotton Mfg. Co.....	Proposed.	.....
Georgetown.....	Central Texas Cotton Co-operative Mfg. Co.....	Proposed.	.....
Huntsville.....	Star State Mill.....	.....	18
Marble Falls.....	Marble Falls Mfg. Alliance.....	Proposed.	.....
Navasota.....	Farmers' Alliance.....	Proposed.	.....
Temple.....	Farmers' Alliance.....	Proposed.	.....
Terrell.....	Terrell Cotton Mfg. Co.....	12,500	42
Tyler.....	Farmers' Alliance.....	Proposed.	.....
Waco.....	Farmers' Alliance.....	Proposed.	.....
Waco.....	Waco Cotton Mills Co.....	2,274	48
Total, 3 mills.....		5,494	124

Virginia.			
Alexandria.....	Mt. Vernon Mfg. Co.....	4,000	124
Danville.....	Montock Mfg. Co.....	7,500	314
Danville.....	Riverside Cotton Mill Co.....	13,000	396
Lynchburg.....	M. Guggenheimer and others.....	Proposed.	.....
Manchester.....	Marshall Mfg. Co.....	7,200	232
Manchester.....	Old Dominion Cotton Mills.....	8,592	256
Norfolk.....	Norfolk Knitting & Cotton Mfg. Co.....	.....	.....
Petersburg.....	Batterea Mfg. Co.....	3,700	98
Petersburg.....	Entrick Mfg. Co.....	9,184	262
Petersburg.....	Matoaca Mfg. Co.....	8,961	248
Petersburg.....	Blue Ridge Mfg. Co.....	3,024	104
Petersburg.....	Swift Creek Cotton Mills.....	3,264	100
Roanoke.....	Roanoke Cotton Mills.....	Proposed.	.....
Suffolk.....	Suffolk Cotton Mills.....	1,224	.....
Total, 13 mills.....		69,649	2,314

† Now building. ‡ Not running.

Cotton Mills That Will Enlarge.

The best possible proof of the advantages of the South for cotton manufacturing is the experience of those in the business, and this experience is best shown in the constant enlargements of mills in operation. All through the South old mills are enlarging and putting in new machinery. They have tested the business by years of operation, and they know what can be done. It is worth while to note what some of these mills are doing. The Clifton Manufacturing Co., of Clifton, S. C., are building an additional mill to hold 19,600 spindles and 600 looms; the Pacolet Manufacturing Co., of Pacolet, S. C., are building Mill No. 2 for 14,000 spindles and 360 looms; the Pelzer Manufacturing Co., of Pelzer, S. C., a second mill for 10,000 spindles and 300 looms. The Piedmont Manufacturing Co., of Greenville, S. C., of which Col. H. P. Hammett, one of the most successful cotton mill managers in the South, is president, will build another mill for 12,600 spindles and 448 looms. This will make three mills, having 47,620 spindles and 1,016 looms, under President Hammett's management. The Maginniss Mill, of New Orleans, will increase its capital from \$500,000 to \$1,000,000 and add 23,000 spindles and 546 looms. The Sibley Mills, near Mobile, have recently been purchased by a New England cotton manufacturer, who will move his machinery to these mills, putting in 7,500 spindles and other machinery. The Brookside Mill, of Knoxville, Tenn., will add 5,000 or 6,000 spindles and a number of looms. The Soque Woolen Mills, of Clarksville, Ga., will add a 5,000 spindle cotton mill to their plant. The Exposition Cotton Mills, of Atlanta, Ga., now running 16,000 spindles and 480 looms, intend to double their capacity, adding 16,000 spindles and 480 looms. The Mississippi Mills, of Wesson, Miss., will increase their 11,000 spindles to about 16,000 or 17,000, and looms proportionately; the Tombigbee Manufacturing Co., of Columbus, Miss., expect to add 4,500 spindles and 120 looms; the Enterprise Manufacturing Co., of Augusta, Ga., will add 7,500 spindles and 300 looms, and the Alabama & Georgia Manufacturing Co., of West Point, Ga., will add 3,000 spindles and 52 looms. These are illustrations of how the work of increasing Southern cotton mill interests is progressing. It is worth

while to summarize some of the additions that are to be made to Southern mills, as reported to the MANUFACTURERS' RECORD:

Name.	Location.	Spindles.	Looms.	Machinery to be added.
Clifton Mfg. Co.....	Clifton, S. C., add'l mill.....	19,600	600	.....
Pelzer Mfg. Co.....	Pelzer, S. C., now adding.....	10,000	300	.....
Eagle Mills.....	Lawrenceburg, Tenn.....	800	.....	.....
Huguenot Mill.....	Greenville, S. C., May build another mill.	.....	.....	.....
Bell Factory.....	Beville, Ala.....	10	.....	.....
Henrietta Mills.....	Henrietta, N. C.....	10,000	300	.....
Powhatan Mfg. Co.....	Ran. Jernan, N. C.....	2,500	32	.....
Pacolet Mfg. Co.....	Pacolet, S. C., add'l mill.....	14,000	360	.....
Adams Cotton Mills.....	Montgomery, Ala.....	2,000	60	.....
Muscogee Mfg. Co.....	Columbus, Ga.....	Indefinite.	.....	.....
Crown Cotton Mills.....	Dalton, Ga., about.....	2,000	50	.....
Nashville Cotton Mills.....	Nashville, Tenn., about.....	100	.....	.....
Elmira Cotton Mills.....	Burlington, N. C., probably.....	1,250	.....	.....
Enterprise Mfg. Co.....	Augusta, Ga.....	7,500	300	.....
Hope Mills Mfg. Co.....	Hope Mills, N. C.....	.....	100	.....
Oakdale Mfg. Co.....	Jamestown, N. C., probably.....	1,500	.....	.....
Newton Cotton Mills.....	Newton, N. C.....	100	.....	.....
Durham Cotton Mills.....	Durham, N. C.....	.....	24	.....
Gastonia Cotton Mfg. Co.....	Gastonia, N. C.....	3,000	.....	.....
Robertel Mfg. Co.....	Rockingham, N. C.....	1,800	.....	.....
Arlington Mfg. Co.....	Arlington, S. C.....	1,200	30	.....
Yecoma Mills.....	Water Valley, Miss., prob.....	.....	100	.....
Mapleton Cotton Mills.....	McComick, S. C.....	400	.....	.....
Exposition Cotton Mills.....	Atlanta, Ga.....	16,000	480	.....
Randolph Mfg. Co.....	Cuthbert, Ga.....	800	.....	.....
Laneau Mfg. Co.....	Greenville, S. C.....	700	.....	.....
Jewell Mills.....	Jewell, Ga.....	Indefinite.	.....	.....
W. H. Cherry & Co.....	Mountain Mills, Ala.....	2,500	.....	.....
E. G. Graham Mfg. Co.....	Asheville, N. C.....	548	30	.....
Trenton Cotton Mills.....	Trenton, Tenn.....	420	15	.....
Long Island Cotton Mills.....	Monro, N. C., probably.....	300	.....	.....
Matthews Cotton Mills.....	Salma, Ala., probably.....	.....	30	.....
Roswell Mfg. Co.....	Roswell, Ga.....	1,000	.....	.....
Shelby Cotton Mills.....	Shelby, N. C.....	1,000	40	.....
Shoals Creek Cotton Factory.....	Parker's Store.....	720	.....	.....
Tombigbee Mfg. Co.....	Columbus, Miss.....	4,500	120	.....
Sibley Mills.....	Mobile, Ala., near.....	6,000	.....	.....
Maginniss Mill.....	New Orleans, La.....	23,000	546	.....
Brookside Mills.....	Knoxville, Tenn., about.....	6,000	240	.....
Rockford Cotton Mills.....	Rockford, Tenn.....	2,800	.....	.....
Piedmont Mfg. Co.....	Greenville, S. C., new mill.....	12,600	448	.....
Cleveland Cotton Mills.....	Cleveland Mills, N. C.....	2,000	.....	.....
Port Gibson Cotton Mills.....	Port Gibson, Miss., probably.....	4,200	108	.....
Fall Mills.....	Allen's Factory.....	Indefinite.	.....	.....
Crescent Mill Mfg. Co.....	Lawrenceburg, Tenn., rebuild.....	2,000	.....	.....
Alabama & Georgia Mfg. Co.....	West Point, Ga.....	3,000	52	.....

What a New England Mill Expert Says.

The Growth of the South's Cotton Mill Interests.

PROVIDENCE, R. I., Jan. 21, 1888.

Editor Manufacturers' Record:

History has established one important fact concerning cotton manufactures, viz: that they have been and are among the profitable industries of the country. Two hundred and twenty odd thousand people employed in our mills, many thousand others engaged in making of machinery and supplies necessary to the manufacture of cotton, the multitudes who are supported through this industry, the large fortunes accumulated by means of it, are all facts which no one will gainsay; but beyond this there is little else concerning it upon which all agree. As soon as you leave the mere facts of history diversity of judgment begins, and no one point has had more written and spoken for and against than the prospects and advantages of cotton manufacturing in the South; and much that has been written and many of the opinions expressed has been determined by prejudice or ignorance. It has come to be an oft-repeated expression, and especially heard from those who are interested in the extension of cotton manufactures in the South, that the mills must go to the cotton, and that sooner or later the manufacture of cotton in the North must be abandoned.

On the other hand, those interested in the manufacture of cotton in the North are equally radical in their claims, and say the North has planted these industries, she has the capital to operate them, and will extend them as the demand for their product requires it: the climate is better adapted to the process of cotton manufacture and produces a more vigorous class of operatives, and when the difference in the amount of work rendered is taken into consideration it will be seen that the labor in the South is no cheaper than in the North. Another claim, and one which one of our influential New England daily journals elaborated upon lately, is that the South is naturally an agricultural section, and can and ought to find ample and more remunerative employment for her people in raising her great staples of cotton, rice, sugar, tobacco, &c.

Now, the claims advanced by both parties apply within certain limits. The radical claims of each as against the other are wrong, for the questions are not susceptible of control either by sectional desire or individual wishes, but is a matter which will be ultimately determined by natural laws.

It is well known that the true interests of a people are best promoted when the products of their industries, either for domestic or foreign trade, are of the kind most favored by nature and produced where nature affords the greatest facilities for cheap production. It is of interest to note that the advantages claimed by the mills in the North over those in the South are precisely the same as those claimed by the mills of Great Britain over the mills of New England several years ago, but which the manu-

facturers of New England have proven to be untrue in the main. That Great Britain does possess some slight advantage over New England in this branch of industry is true as the North possesses certain advantages over the South and will continue to do so.

The mills of the Southern States possess a decided advantage over the mills in the North and Great Britain in that they have the raw cotton at their doors, and that this alone represents a money value sufficient to give them control of the coarse goods has been fully demonstrated within the last ten years. This difference can be more clearly shown by the following illustration. Let us assume a 40,000 spindle mill located at any well selected site in the cotton growing section of the Southern States. This mill properly equipped with the latest and most approved style of machinery for the manufacture of standard 4-4 sheetings to Nos. 12 to 14 yards would cost complete \$800,000, and would consume 20,000 bales of cotton per annum. It is variously estimated that the difference in cost of a bale of cotton—400 pounds—between the mills in Augusta, Ga., and Fall River, Mass., is from \$4 to \$6 per bale. Assume the lowest estimate of \$4 per bale and you have 20,000x\$4 equals \$80,000 in favor of the Augusta mill, or a saving of 10 per cent. on the complete cost of the mill in cotton alone.

The manufacture of cotton in the Southern States has long passed the experimental stage, and sufficient has been done to remove objections in the minds of all fair-minded men as to climate and disposition and capacity of operatives. It is true, the operatives of the South are not so skilled as the operatives of the North, and that the climate in the New England States may produce a more vigorous operative, but the cold New England climate is not without its drawbacks, and we should question whether with the cold winters in New England there is not a greater percentage on the sick list out of 1,000 operatives in the Northern mills than in the Southern mills. We believe it to be true that the whole country will be benefited by the extension of cotton manufacture in the South—the South greatly and the North indirectly but surely—for the reason that when the South shall obtain full control of the coarse goods and can fix the market price of same, then the United States can control the markets of the world for this class of goods. That the South is making rapid and commendable progress in the extension of this branch of her industries will be shown by the following figures. In 1880 there were in the Atlantic and Gulf Southern States mills distributed as follows:

States.	No. of Mills.	No. of spindles.	No. of Looms.	Average No. spindles per mill.
Maryland.....	22	130,100	1,649	5,913
Virginia.....	10	52,134	1,311	5,213
North Carolina.....	51	98,386	1,701	1,909
South Carolina.....	20	94,366	1,933	4,716
Georgia.....	52	207,222	4,362	4,023
Alabama.....	19	15,392	513	2,997
Mississippi.....	8	52,028	616	2,753
Texas.....	9	6,260	288	3,130
Louisiana.....	5	9,374	113	1,874
Total.....	189	678,223	12,675	3,588

It will be seen there were in 1880 189 mills with a total capacity of 678,223 spindles, being about 7 per cent. only of all the spindles in the United States.

At the beginning of 1888, a period of seven years, these same States showed the following increase:

State.	No. of mills.	No. of spindles.	No. of Looms.	Average No. spindles per mill.
Maryland.....	20	175,550	2,053	8,777
Virginia.....	13	69,649	2,314	5,337
North Carolina.....	51	210,854	3,699	4,156
South Carolina.....	34	248,136	5,734	7,298
Georgia.....	58	309,449	6,007	5,321
Alabama.....	20	144,540	3,384	5,727
Mississippi.....	10	52,844	1,296	5,284
Louisiana.....	5	38,968	1,044	7,793
Texas.....	3	5,494	224	1,831
Total.....	254	1,345,475	26,735	5,301

In seven years the number of spindles in the nine States named has increased nearly 100 per cent., and still they have only about 9½ per cent. of the spindles in the country, or about 500,000 less than in the State of Rhode Island alone.

The questions are often asked: do the Southern mills pay, and how much? The average dividends of forty of the first-class and best corporations in New England for the years 1870 to 1878 were 11½ per cent., while the average dividends for twenty-two of the first-class or best mills selected from the nine Southern States, for the same period referred to, were 18½ per cent., and many of the mills South show for the year 1887 gross earnings of from 24 to 28 per cent. on their total expenditure. It has been shown in numerous instances that no more promising and lucrative investment in legitimate business enterprises can be found than in the manufacture of cotton in the South, and that she has a bright future before her in this industry no one will deny. C. R. MAKEPEACE.

THIS issue of the MANUFACTURERS' RECORD contains sixty pages.

THE SOUTH'S ADVANTAGES.

Cotton Manufacturing South a Safe and Profitable Business When Well Managed.

A Noted Expert's Opinion.

COLUMBUS, GA., Jan. 23, 1888.

Editor Manufacturers' Record:

In reply to your favor of 18th requesting my views as to the position of cotton manufacturing South, I will state them as based on experience and observation.

Any one well informed on cotton manufacturing in the United States, who has carefully considered its position South, can but conclude that for the spinning of coarser numbers of yarns, and their conversion in o goods, the South possesses advantages not found elsewhere. Past experience has already determined it as a recognized fact, that for spinning coarse single-carded yarns, numbers 14 and under, and their shipment to Philadelphia, which is the great central market, it is impracticable for other sections of the country to compete. The items of freight and cheap labor enter so largely into their production as to give this result. The competition in such yarns, which has sometimes rendered their manufacture unprofitable, has been among the Southern mills themselves.

In the course of grades of single-carded woven goods, such as sheetings and shirtings, there is now little outside competition with Southern products. During the past fifteen years, Eastern mills have gradually reduced their output of these goods, as the South has enlarged its capacity for producing them. The same is true of oenaburgs and some other of the common grades. The Eastern mills have largely turned their attention to double-carded or finer fabrics, until now very few of them produce these goods in competition. About all that remains, with a few exceptions, of Eastern products of this class, is in very large mills a small per cent. of the machinery is employed to work up the waste products from finer grades, in connection with a per cent. of good cotton, and by double carding and careful manufacture, these goods are now produced and sold by them. If there yet remains any considerable number of mills East producing single-carded coarse yarns, brown sheetings or similar goods, in successful competition with the South, I am not aware of it. This field has been about abandoned to the mills of the Cotton States, and certainly no intelligent Northern manufacturer would to day build a mill for their production. From year to year the Northern mills, on coarse goods, average higher numbers and products. High speed spindles and finer numbers about what their new machinery is adapted for.

What has been said as to yarns and white goods is also true of the coarser grades of common colored cotton goods. Southern products in these goods are largely used at home, and many are shipped North and Northwest, while a few years ago a large per cent. of them were shipped South from Philadelphia and the East. In these results there has been no abandonment of manufacture in the North, but a gradual changing to finer grades, leaving to the South their manufacture. On the other hand, there has been little tendency South to go into the manufacture of finer fabrics. Such efforts as have been made in that direction have scarcely been satisfactory to those making them. There are ample markets for both the Northern and Southern cotton manufacturer, and success will certainly attend any manufacturing enterprise South on the goods adapted to be manufactured if the proper plant and management is provided. Every instance of want of success in Southern mills, I think, can be found in the failure of one of these conditions—either the

wrong style of goods, improper mill plant or management. This is on the assumption that the requisite amount of capital has been supplied. An exception has been noted in this connection—the recurrence of times of financial depression, when success has not attended manufacturing anywhere; but at such times all other industries suffer alike. It is the average that must be taken in all manufacturing and business, and I think, on a careful examination of the facts, it will be found that the average profits of manufacturing cotton south have returned fully as large per cent. as any other branch, and under good management, greater than other average investments in manufacturing.

There is a combination of conditions South that concur to specially adapt that section for the manufacture of the class of goods mentioned. Those most important I regard as the saving in freight, abundance of cheap labor, reduced cost of living, mildness of climate, and the character of industries and society. The reference these have to cotton manufacturing I will more particularly explain.

In the item of freight little explanation is required. There is usually no freight charge on cotton to a Southern mill. Commissions, storage, insurance, compressing, sampling, loss of weight, exchange, breakage, &c, are either absent or items of reduced cost. If freight is paid on manufactured products shipped away it is on net weights, which amount to about one hundred pounds less than the gross weight of each five hundred pound bale of cotton, that being about the weights of bagging and ties, and the loss in manufacturing one such bale. The freight classification on manufactured goods is also lower than on cotton, and freight charges less per pound. As this saving is an important item, it follows that the Southern manufacturer should make the most of it and spin as many pounds as he can profitably. To accomplish this he must spin the coarser numbers of yarns. One spindle will spin in one day of either number of yarn about as follows: Sixteen ounces of No. 10 yarn, nine ounces of No. 14, six ounces of No. 20, four ounces of No. 28, or three ounces of No. 32. From these facts it appears that a spindle on No. 10 will spin five times as much as one on 32, and on 14s will spin three times more weight.

I think that the dividing line between plain goods of standard quality to be manufactured South and North locates itself on about No. 20 yarns; below this number the South holds the field, or may do so, when her mills can supply; above it the North has its proper position not likely to be disturbed. This gives the South opportunities for the development of profitable cotton manufacturing, and until the Southern mills can supply the markets of the country fully with these classes of goods, building enterprises can continue with every confidence of success. At present few goods are made with yarns above 14s. There is yet profitable demand for many more of the goods now made, while between 14s and 20s a large field is open whenever machinery is here to occupy it. But it must be modern machinery, and properly planted. There is no place for old machinery and home-made constructing education in this field from 14s to 20s. There is a surplus of available labor South now unemployed such as cotton manufacturing requires. The other industries here now usually give employment only to grown males; the females are generally unemployed except in domestic duties. In the cotton States many white females work in the fields for want of other occupation. The state of labor and society is such as to render the condition of labor permanent. Colored labor is cheap and available for all pure labor avocations, and usually has the preference. Colored, male and female, old

and young, is fully employed and not in surplus, while in almost every town and city will be found a large surplus of white labor, male, female and minors. Where cotton mills have been built the uniform experience is that a surplus of this labor offers itself, eager for employment. It is native born and unskilled, but on the coarser products is quickly adapted to the work, and soon becomes skilled and expert. This labor, accustomed to receiving moderate wages, is easily satisfied, employment being the first consideration. The capitalists of any town or city having such surplus will confer great benefits on this class, as well as upon the community in general, in building a cotton mill, while at the same time, if judicious management is in the enterprise, profits will be satisfactory to themselves. Manufactures of iron, lumber, cotton-seed oil and the like give employment to adult males, leaving minors and females unemployed; the cotton mill employs the latter class and so completes the community in industries. The mild climate is very much in favor of cheap labor. It reduces the cost of clothing, fuel and food, and dwelling houses for the laboring classes average less than half the cost of the same class in rigorous climates, and hence reduced house rents.

In conclusion I will say that under the ordinary conditions investments in cotton mills South well made and managed are a safe and profitable use of capital, and will pay fully as well or better than investments in most other branches of manufacturing. The same care, judgment and attention to it that would be necessary in any other business enterprise will most assuredly make cotton manufacturing profitable.

JOHN HILL.

Benner's Prophecy.

Pig Iron Benner, as he is known, has been very fortunate, to say the least, in times past, in his predictions as to business. He bases his forecasts on price cycles, claiming that there is a regular and certain recurrence at stated intervals of high and low price cycles, and those who have watched his predictions in former years, must admit that he has been more successful than the weather prophets. Of the future he says:

"This year, 1888, being the closing year in this cycle of low prices—seven years from 1881—is the golden opportunity to commence the foundation for a business. If there is any benefit to be derived from a knowledge of these cycles in trade, it will be in taking advantage of them."

"Young men who are about to commence their business career should embrace their present opportunity. There are but few of these chances in an ordinary life. It requires about ten years to complete an up and down in general trade."

"When the depressions which follow commercial crisis reach their lowest limit, as determined by these price cycles, they afford the best opportunities for investment, and the height of speculative eras are the most dangerous periods to make a commencement in any enterprise."

"This is the opportunity for investors to open a mine, to build a furnace, to erect a mill, to build a ship, to equip a railroad, and to make investments in agricultural, commercial and industrial operations."

"George Peabody laid the foundation for his fortune by buying American securities in one of our commercial depressions."

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the MANUFACTURERS' RECORD.

The New England Cotton Manufacturing Industry.

The dividend record of the principal New England cotton manufacturing companies makes a much brighter showing for 1887 than for any year before since 1883. The gain over 1886 is noteworthy, while that over 1885 is still more remarkable. Only two out of sixty-six of the most important corporations divided less in 1887 than the second year previous, and the reduction in these two cases was due to exceptional causes. Full statements of the payments made from 1873 to 1884 were published in these columns three years ago. The record is now brought down to date, the following tables (which include two or three companies manufacturing wool as well as cotton) showing the average dividends of the companies named for periods ending with 1884, the annual dividends since 1884, and the averages for the last three years:

DIVIDENDS FOR FIFTEEN YEARS.					
	Average	'85.	'86.	'87.	Av'ge.
Augusta-Edwards.....	1873-84.	4 1/2	4	4	4.50
Biddeford-Lonsconia.....	6.33	6	5 1/2	6	5.83
Pepperell-Cabot.....	19.00	12	19	12	12.00
Brunswick-Cabot.....	7.66	3	..	6	3.00
Chicopee-Chicopee.....	10.50	..	..	6	2.00
Dwight.....	5.25	6	7	9	7.33
Dover-Cocheco.....	9.50	6	6	..	4.00
Great Falls-Yt Falls.....	3.08	..	..	5	1.67
Holyoke-Lyman.....	5.50	..	3	4	2.00
Lawrence-Atlantic.....	5.00	..	..	3	1.00
Everett.....	3.58	..	..	3	0.67
Pacific.....	14.58	10	10	10	10.00
Lewiston—					
Androscoogin.....	7.91	7	6	7	6.67
Bates.....	7.66	6	6	7	6.33
Franklin.....	4.75	6	6	6	6.00
Hill.....	5.50	..	..	5	2.33
Lowell-Appleton.....	3.00	..	..	..	..
Boott.....	9.79	6	5	7	6.00
Hamilton.....	5.50	..	..	..	..
Lawrence.....	8.16	6	6	10	7.33
Massachusetts.....	6.58	2	2	6	3.53
Merrimac.....	7.66	6	6	6	6.00
Tremont & Suffolk.....	7.87	2 1/2	3	6	3.83
Manchester-Amory.....	3.75	..	..	6	4.00
Amoskeag.....	11.08	10	10	10	10.00
Langdon.....	8.00	..	3	10	4.33
Manchester.....	8.50	8	8	10	8.67
Stark.....	7.16	5	7 1/2	8	6.83
Nashua-Jackson.....	8.10	6	6	7	6.33
Nashua.....	7.33	..	..	8	2.67
New Bedford—					
Wamsutta.....	6.66	4	6	6	5.33
Saco-York.....	8.91	7	7	8	7.00
Salem-Naumkeag.....	5.91	..	2	6	2.67
Salmon Falls.....	4.66	..	4	5	3.00

FALL RIVER DIVIDENDS.					
	Average	'85.	'86.	'87.	Av'ge.
American Linen.....	1873-84.	10.00	12 1/2	13 1/2	8.75
Barnard.....	7.83	..	5 1/2	6	3.83
Bourne.....	..	2	5	14	7.00
Borver City.....	6.00	4	8 1/2	12	8.17
Barnaby.....	..	6	8 1/2	6	6.83
Chace.....	16.40	..	6	6	4.00
Crecent.....	3.25	..	6 1/2	6	4.17
David.....	3.75	..	..	15 1/2	6.50
Fall River.....	..	..	3	3	2.00
Flint.....	14.40	..	6	6	4.00
Globe.....	..	9	6	8	7.67
Granite.....	21.66	7	12	17	12.00
King Philip.....	5.16	..	6	6	4.00
Laurel Lake.....	..	1	4 1/2	6	3.83
Mechanics.....	8.00	..	6 1/2	6	4.17
Mercantile.....	9.66	1	8	7	5.33
Metacomet.....	..	..	..	3	1.00
Narragansett.....	6.50	1	6	6	4.33
Osborn.....	9.91	..	8	6	4.67
Pocasset.....	..	..	..	6	2.00
Richard Borden.....	15.50	..	3	6	3.00
Robeson.....	..	..	4 1/2	6	3.50
Sagamore.....	19.40	1	8	11	6.67
Shore.....	7.00	..	4 1/2	6	3.50
Slade.....	5.66	..	15 1/2	3 1/2	1.67
Staford.....	10.83	3	7	12	7.33
Seacomet.....	..	..	..	5	1.67
Tecumseh.....	9.33	1	7	8	5.33
Troy.....	18.20	..	11	17	9.33
Union.....	12.20	12	16	21	16.33
Wampanoag.....	9.16	..	9 1/2	13	7.50
Westamoo.....	5.50	..	4	4	2.67

*Average for four years. †Average for five years.

The three-year period ending with 1887 includes two years of continued and unusual depression. For this reason the average return is in general much less than for the periods of six or twelve years closing with 1884. Reverses were common enough in 1875-78, but, including the remarkable activity of 1873-74 and 1879-83, the general results were naturally above the range for the last three years.

The mills as a rule are now running to their full capacity, with goods in many instances sold ahead of production. The new year opens with every promise of returning as liberal profits as 1887. This is true both of the special print-cloth mills of Fall River and of the miscellaneous cotton-manufacturing companies of Manchester, Lowell, Lawrence, Lewiston, Nashua and other cities and towns.—Bradstreet's.

If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$3.00 a year.



THOS. K. CAREY & BROS.

Leather and Rubber Belting,

Cotton and Woolen Mill Furnishers,



Railroad & Machinists' Supplies,



21 S. CHARLES STREET, BALTIMORE, MD.

The unprecedented growth during the past few years of the manufacturing interests of the South, especially of Cotton and Woolen Mills, has naturally increased the demand for Mill and Machinists' Supplies near at hand. It has been and will continue to be our policy to meet this growing demand, and to carry in stock for this purpose the best and most complete line of goods the market will afford. We would call attention to the following, which we can furnish promptly at the lowest market prices.

Leather Belting.

Agents for Hoyt's Short Lap Leather Belt.

Machine Card Clothing.

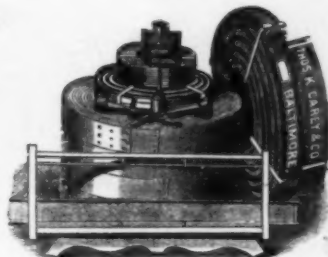
Agents for T. K. Earle Manufacturing Company.

Rubber Belting, Packing and Hose.

Agents for Boston Belting Company.



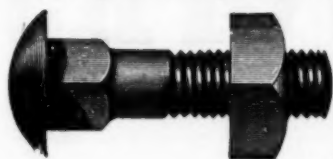
Rubber Belting,
Cotton Belting,
Rubber Hose,
Cotton and Linen Hose,
Suction Hose,
Steam Hose,
Fire Hose,
Packing,
Deckle Straps,
Car Springs,
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Mechanical Rubber
goods of every de-
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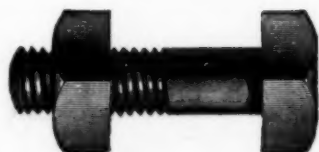
Leather Belting,
Needle Point Card
Clothing,
Cotton and Wire
Heddles,
Lace Leather,
Picker Leather,
Spools,
Bobbins,
Shuttles,
Frames and Reeds,
Spinning Rings,
Travelers.



Bolts, Nuts, Screws, &c.



Machine Bolts,
Car Bolts,
Button Head Bolts,
Hanger Bolts,
Square Nuts,
Hexagon Nuts,



Lag Screws,
Set Screws,
Cap Screws,
Wood Screws,
Machine Screws,
Bolt Ends.

Pulleys, Shafting, &c.



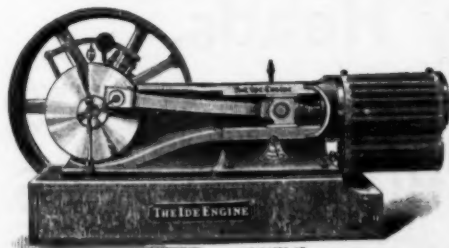
Morse Drills,
Black Diamond Files,
Chucks,
Lathe Tools,
Hammers,
Wrenches,
Calipers and Gauges,
Pipe Stocks and Dies,
Taps and Reamers,
Screw Plates.

Emery Wheels.



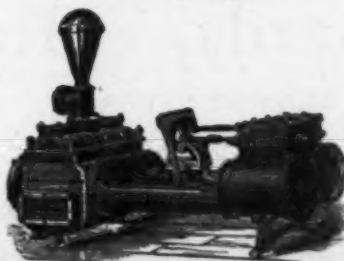
Emery Wheel Machinery and
Emery.

Engines and Boilers.



Pressure Gauges,
Vacuum Gauges,
Governors,
Iron Pipe,
Pipe Fittings,
Injectors,
Oil Cans,
Cotton Waste.

Steam Pumps.



Metal Working Machinery.

Lathes,
Planers,
Shapers,
Gear Cutters,
Screw Machines,
Bolt Cutters,
Nut Tappers,
Drill Presses.



Orders promptly filled. Write
for price-lists and discounts.

THOMAS K. CAREY & BROS., 21 S. CHARLES STREET, BALTIMORE.

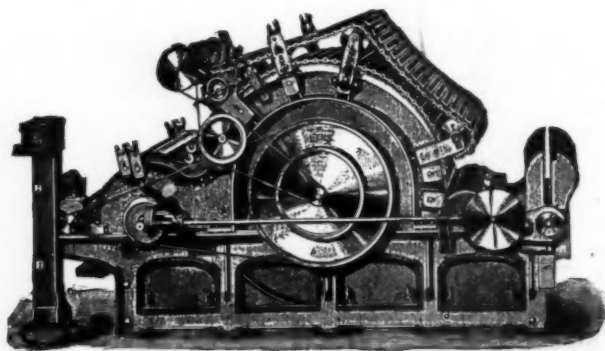
Cotton Machinery.



THE REVOLVING

Flat Carding Engine

IS REPLACING ALL OTHER CARDS IN OUR FOREMOST MILLS.



Pettee Machine Works

NEWTON UPPER FALLS, MASS.

Sole makers in America—Platt Pattern. Also builders of the following machines:

PETTEE COMBINATION CARDS,

THE BEST AND CHEAPEST OF AMERICAN CARDS.

Top Flat Cards, Railway Heads,

WELMAN STRIPPER.

IMPROVED PATTERN.

DRAWING FRAMES, WITH OR WITHOUT COILERS,

And Other Machinery.

Repairs furnished promptly for Higgin's Roving Frames. Send for Cuts, Circulars and Plans for Carding Rooms.

DYEING • DRYING • AND • FINISHING • MACHINERY

FOR COTTON WARPS AND PIECE GOODS.

Drying Machines, Dyeing Machines, Sizing Machines, Calenders, &c.

H. W. BUTTERWORTH & SONS,
PHILADELPHIA, PENNSYLVANIA.

Fall River Machine Co.

— BUILDERS OF —

Ring Spinning Frames

— FOR WARP OR FILLING. —

Spoolers, Reels, Warpers, and Creels, Top-Flat and Foss
& Pevey Cards.

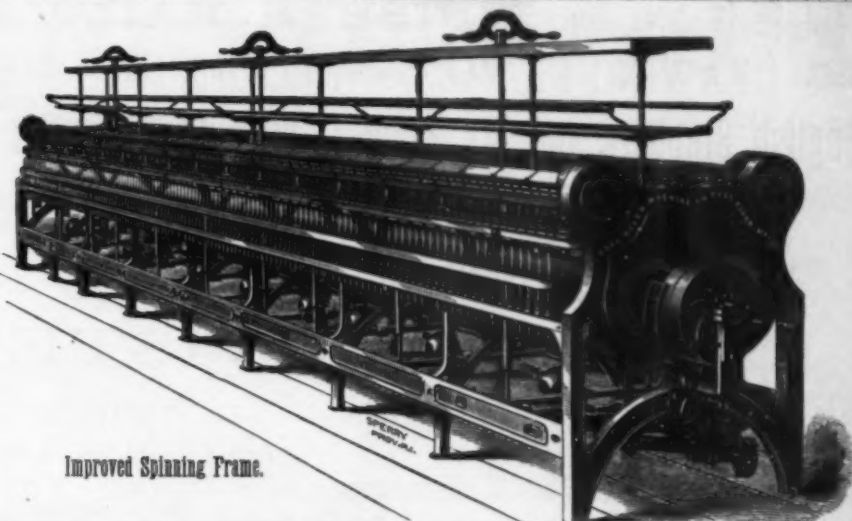
Railway Heads, Drawing Frames, Loom Cranks and
Cams, 3, 4 or 5 shed, Pulleys, Shafting, Hangers.
Pipe and Patterns, Steel and Iron Fluted Rolls.

— Manufacture and Repair —

Marine and Stationary Boilers, Tanks, Steam Boxes for Filling, Etc.

GEO. H. BUSH, Treas.
H. C. SPENCE, Supt.

Fall River, Mass.



Improved Spinning Frame.

Crompton LOOM Works, WORCESTER, MASS., U. S. A.

The Original and Most EXTENSIVE WORKS for the Building of FANCY WOOLEN, COTTON and SILK LOOMS in this Country.

The Crompton Cam Loom,

With "1886" box motion, is superior for broad
Flannels and Blankets, and is built of any
desired width and Shuttle-Box capacity, and with
two, three, four and five-leaf cams.

The Crompton Silk Loom

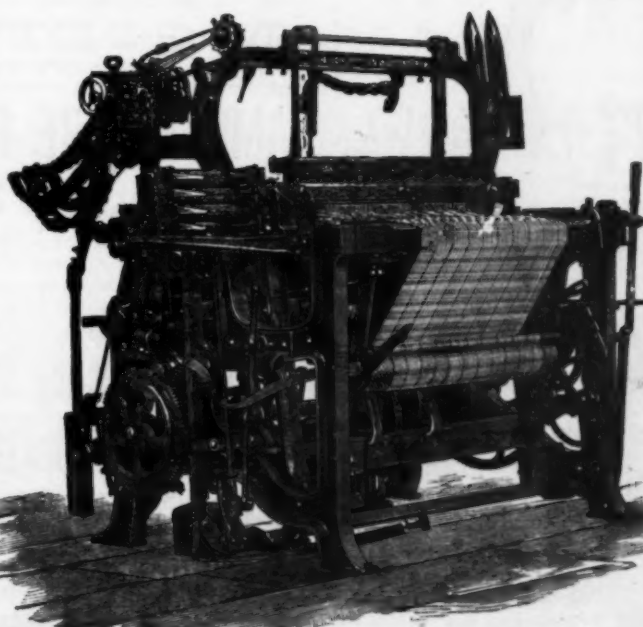
Is excellent in design and operation, and has
patented special devices particularly adapted for
the wants of Silk Manufacturers.

The Crompton Jean Loom

Has a fixed reputation for KENTUCKY JEANS, &c.

THE CROMPTON IMPROVED Close-Shed '1886' Fancy Loom

Is the best for Worsted and Fancy Cassimeres.
It is of twenty-seven harness capacity, four boxes
at each end, and patent safety let-off and
filling stop-motions. The "1886" Box motion is
a positive crank and differential lever movement;
any of the compartments of either series of Shuttle
Boxes are commanded at any pick. Single or
Double Beam arrangement as desired.



CROMPTON'S "STANDARD" GINGHAM LOOM, 37 1/2 INCH—4X1 BOX—2, 3 AND 4 LEAF.

CROMPTON'S "STANDARD" Gingham Loom

— IS THE —

Standard for Ginghams, Plaids and similar
goods. It is made with four or six boxes
at one end, or four boxes at each end, and
with two, three and four-leaf cams.

IT HAS

MANY PATENTED IMPROVEMENTS.

Crompton's Improved Comb, ON THE NOBLE PRINCIPLE.

Is freely admitted by experts to be, in many respects, the Best Comb yet produced. In workmanship, character and production it competes with any Noble Comb made. Is adapted
for either coarse or fine wool, and is furnished with a baller, or a can collar, or spout for a stationary can, as may be desired. The main driving
and smaller shafts are steel. The CIRCLES are of choicest construction, and guaranteed in every respect.

In price it cannot be underbid. Correspondence solicited.

SACO WATER-POWER MACHINE SHOP,

—BIDDEFORD, MAINE,—

Manufacturers of

COTTON * MACHINERY

OF THE MOST IMPROVED PATTERNS

CARDS,

Cylinders, 36x36 and 36x30, with 20 tops and Self-Strippers and Railway Troughs. Union Cards, with workers, strippers and tops.

FINISHER RAILWAY HEADS.

DRAWING FRAMES, ANY LENGTH, WITH 3, 4 AND 5 LINES OF STEEL ROLLERS.
English Slubbers and Fly Frames, With Long or Short Bolsters.

—BOBBINS—12x6, 11x5½, 10x5, 9x4½, 8x4, 7x3½, 6x3, and 5x2½.

RING SPINNING FRAMES, 2, 1¼, 1½ AND 1½ INCH RINGS.

—TWISTERS.—

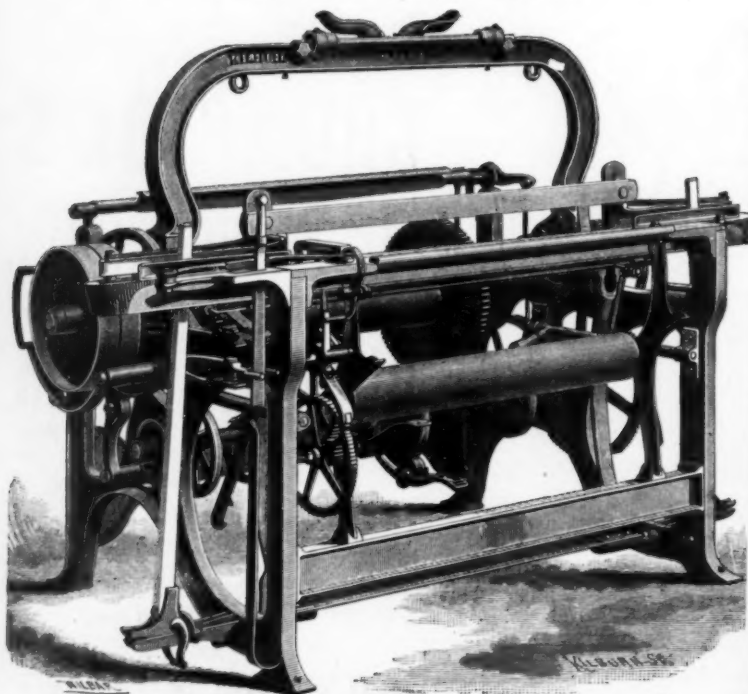
SELF-ACTING MULES, Parr, Sharp and Roberts' and Higgins' Pattern,
1½, 1 5-16, and 1½-inch Gauge.

S. W. RICHARDSON, Treasurer,
No. 1 Simmons Building, Boston.

JAS. H. McMULLAN, Agent,
Biddeford, Maine.

KILBURN, LINCOLN & CO.

FALL RIVER, MASS.



—LOOMS—

For Cotton and Silk Weaving. Special Patterns
for Weaving Cambric, Muslin, Sheetings,
Tickings, Ducks and Print Cloths.

The Seacomet Mills, Fall River, wove in 300 days of 10 hours each 14,000,000 yards of 64x64 goods on
930 of our "New High Speed Looms," a daily average of 50 7-10 yards per loom per day.

FOR SALE.

1 36-in. 1 Beater Breaker Lapper. } English.
1 36-in. 1 Beater Finisher Evener. }
1 36-in. 3 Beater Kitson, with preparator.
3 36-in. 3 Beater, Whiting's.
5 36-in. 2 Beater, Whiting's.
5 30-in. 2 & 3 Beater, Whiting's.
50 36-in. Welman Stripper, Whiting's Cards.
50 36-in. V-Man Stripper, Saco Water Power.
80 30-in. V-Man Stripper, Whiting's.

50 12-6, 10-5, 9-4½ Slubber's, different makes.
25 7 1-3½, 6-3 Speeders.
100 Spinning Frames, 1½ in., 1¼ in., 2 in. & 2½ Ring,
common, Spindle Taper, Rabbit Sawyer Spindle.
50 Twistors, 1½ in., 1¼ in., 2 in., 2¼, 2½ in., 3 in.,
3½ Ring.
50 Spoolers of different makes.
16 Carpender Reels.

All this machinery is first-class. For further particulars apply to

L. GODFREY & CO.
PROVIDENCE, R. I.

DIAMOND CORE PROSPECTING DRILLS.

THE SULLIVAN DIAMOND DRILLS

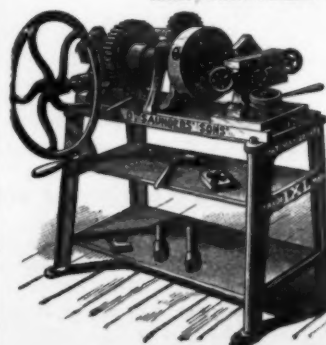
Excel in Simplicity and Strength of Design, Rapidity of Work, Economy
in Wear of Carbon, and Accuracy of Results. These Drills are sold
without any restriction. We carry in stock five sizes of Drills, and can
fill orders promptly. Contracts taken for all kinds of Diamond
Drill Work. Send for catalogue.

Diamond Prospecting Co., 22 W. Lake St.,
CHICAGO, ILL.



D. SAUNDERS' SONS,

MANUFACTURERS OF THE ORIGINAL



TRADE **I.X.L.** MARK.

Pipe Cutting and
Threading Machine.

BEWARE OF IMITATIONS.
None genuine without our Trade
Mark and name. Also

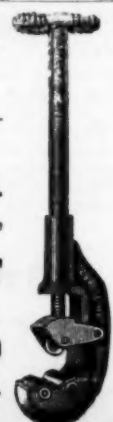
Patent Wheel Pipe Cutter

STEAM AND GAS FITTERS'
HAND TOOLS,

Pipe Cutting and Threading Machine

For Pipe Mill Use a Specialty.
Send for Catalogue B.

YONKERS N. Y.



Tuskaloosa, Ala.

— * ALABAMA'S NATURAL PITTSBURGH. * —

A Railroad & River Town of 6,000 Inhabitants, in the Coal, Iron & Timber District.

— DIPLOMAS FOR —

The Best Furnace Coke and the Best Blacksmith Coal

Were awarded this city over all and many competitors at the great Piedmont Exposition.

HEALTHFUL LOCATION. SALUBRIOUS CLIMATE. SCHOOL FACILITIES UNEQUALED BY ANY OTHER TOWN IN THE SOUTH.

— "EXAMINE THE MAP." —

— + SITUATED ON +

Queen & Crescent

— TRUNK LINE, —

IN THE

Warrior Coal Field

AND ON THE

WARRIOR RIVER.

Only Navigable River touching the

Alabama Mineral Field.

Eight Months Navigation. Being Surveyed
now to be opened all the year round.

All Water Navigation to

❖ **MOBILE** ❖

AND THE

Entire Gulf and Atlantic Coasts.

— THE —

— **Tuskaloosa Northern Railroad** —

Is now under construction into the

MINERAL and TIMBER FIELDS.

— THE —

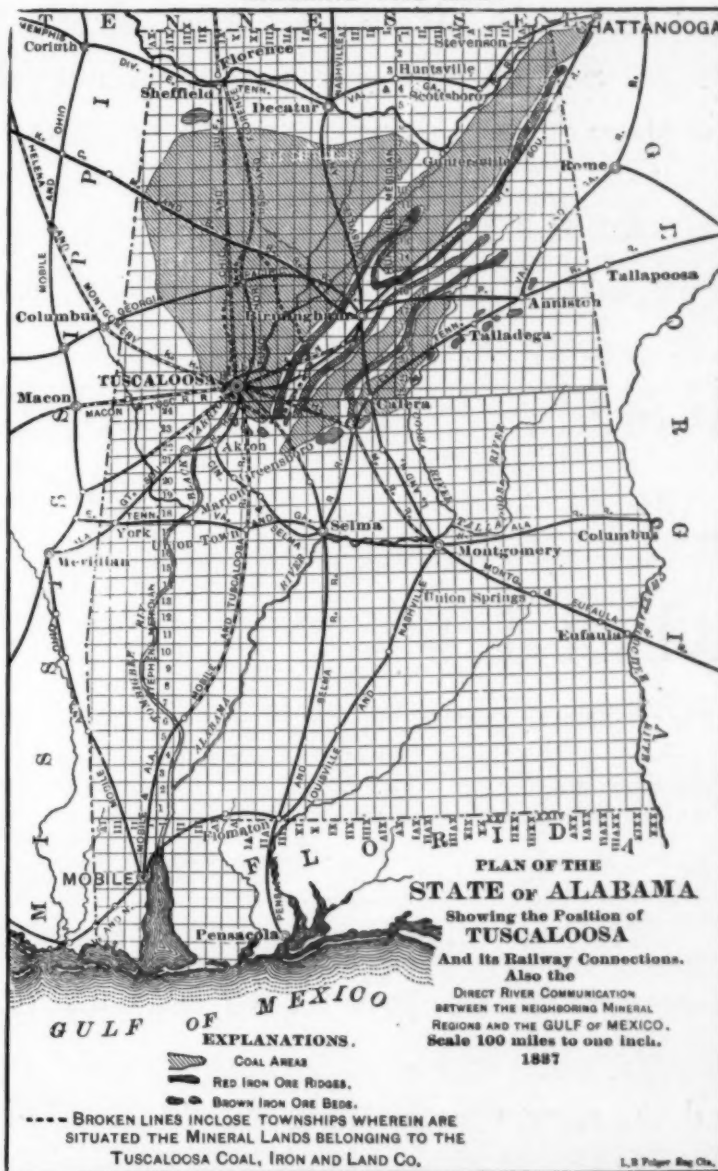
— **Macon & Tuskaloosa Railroad** —

Will soon be building into the

COTTON REGION OF MISSISSIPPI.

Fine Farming Region

Around and Below the City.



Superior Inducements

AND

+ ADVANTAGES +

TO ALL

**Manufactories Consuming
WOOD,
IRON,
COTTON.**

FINE COOKING COAL

In workable veins near city, fully tested.

— **The Fire Clay** —

Existing in inexhaustible quantities, has been
practically tested and pronounced

The Best yet Discovered in the South.

Street Car and Dummy Lines

NOW BUILDING.

— **Water Works and Electric Lights** —

TO BE PUT IN AT ONCE.

COTTON MILL

In Successful Operation.

ALSO

LARGE BRICK WORKS

COTTON-SEED OIL MILL, &c.

Manufacturers Seeking Locations in the South have here

THE GOLDEN OPPORTUNITY.

Many have availed themselves of it, but such is the wonderful richness of the resources of this section that there is

— ROOM FOR ALL. —

THE **Tuskaloosa Coal, Iron & Land Co.,**

Owning 4,600 acres of city and suburban property, and 40,000 acres of mineral and timber lands, offers liberal inducements to manufacturers
to locate at Tuskaloosa, Nature's City, and invites correspondence and the fullest investigation of its claims.

An illustrated descriptive pamphlet sent free upon application to

W. C. JEMISON, President Tuskaloosa Coal, Iron & Land Co., **TUSKALOOSA, ALA.**

Florence, Ala.

County Seat of Lauderdale County.

At Head of Navigation on Tennessee River, and at Foot of Muscle Shoals Canal,
which will be open Jan. 1st, 1888.

SITUATED on a gently undulating Plateau, 200 feet above high-water mark, surrounded by three large creeks of pure free-stone water. It has a Court House, Two Colleges, Four Public Schools, Six Churches, beautiful wide streets, graded and graveled, and shaded with forest trees; Hotels, fine store houses, Masonic, Odd Fellows, K. of H. and L. of H. lodges. A population of 2,500—moral, social and hospitable.

— The Scenery on Every Side is Picturesque and Beautiful. —

SO MUCH SO THAT IT IS CALLED BY VISITORS

== FAIR FLORENCE. ==

There is no Place on the Continent more Healthful and Salubrious.

MANUFACTURES.

Within the last six months numerous manufactures have been located here, among the number:

Five Large Blast Furnaces.	One Saw Mill,	One Cotton Mill,	Two Brick Machines and
One Rolling Mill,	One Flour Mill,	One Cotton Compress and Ice	Three Hand-Brick Yards.
Three Planing Mills,	One Wooden-Ware Factory.	Factory.	

There are VAST BEDS OF IRON ORE within a few miles North and
IMMENSE COAL FIELDS SOUTH

ACCESSIBLE BY RAILROADS NOW BEING RAPIDLY CONSTRUCTED.

By the 1st of January the Nashville & Florence Railroad will be completed, making three lines of railroad, and the river, thus opening up VAST AREAS OF TIMBER, IRON ORE, COAL, Marble, Limestone, Kaolin, Fire-Clay, and almost every kind of mineral and product.

THE LANDS IN THE SURROUNDING COUNTRY ARE FERTILE AND PRODUCTIVE.

All kinds of Grain, Grasses and Fruits grow to perfection. Springs and Water Courses are numerous, and grazing for Cattle is abundant for eight months of the year.

Pamphlets and maps furnished on application to

Florence Land, Mining & Manufacturing Company.

GADSDEN, ALA.

Is situated on the West Bank of the COOSA RIVER, in the midst of the

RICHEST IRON AND TIMBER SECTION

IN THE FAVORED STATE OF ALABAMA.

➤ The Gadsden Land and Improvement Company ➤

Own large tract of Eligibly Located Residence Property in the Most Desirable Part of the City, and have fine location on river and railroad for

MANUFACTURING ESTABLISHMENTS,

And are offering great inducements to manufacturers to locate their plants in this *FAVORED LOCALITY*. No place in the South has such *Wonderful Advantages*. Situated in the midst of the *RICHEST IRON SECTION* in the *STATE*, at the foot of Lookout Mountain on the banks of a Navigable River, (*THE BEAUTIFUL COOSA*), surrounded by Forests of the Finest Timber on the Continent, with Fine Building and Fire Clay, and the *FINEST BUILDING STONE* all around us, with

Uninterrupted Health, and the Purest and Best Water and Finest Drainage of any City in the State,

Gadsden should become the Greatest Manufacturing Center of Alabama.

THE Alabama Great Southern, Rome & Decatur, Tennessee & Coosa, Anniston & Cincinnati Railroads, with the ever-flowing Coosa navigable the year round, gives us as *FINE TRANSPORTATION FACILITIES* as any other city enjoys.

We now have Railroad Car Works, Furnaces, Foundry and Machine Works, Saw Mills, Sash, Door and Blind Factory, Furniture Factory, Ice Factory, Paint Mills, Grist and Flouring Mills, Cotton Ginnery, Fine System of Water Works, Electric Lights, Telephone Communication over City, and also to neighboring cities Atlanta and Rome, Ga.

WE WANT Rolling Mills, Bridge and Bolt Works, Cotton Factories, Woolen Mills, Furniture Factories, in fact all kinds of Factories, even Coffin Factories, (but we want to ship the Coffins to some of the other booming cities.)

Liberal Grants of Land will be made by THE GADSDEN LAND AND IMPROVEMENT Co. to any of the above-named industries.

FOR FURTHER PARTICULARS ADDRESS

M. L. FOSTER, Sec. & Treas.

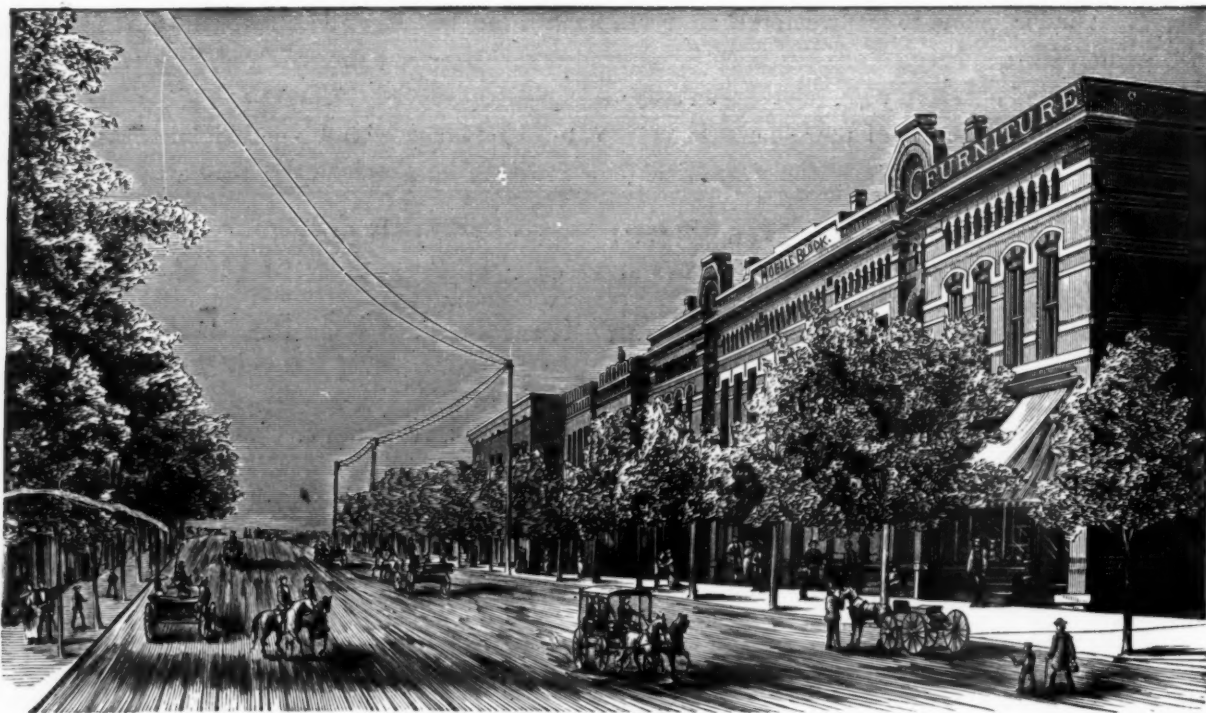
THE GADSDEN LAND & IMPROVEMENT CO. - - GADSDEN, ALA.

POST-OFFICE BOX 145.

ANNISTON, ALA.

"The Model City of the South."

THERE is no healthier or more charming place of residence in America than Anniston; built on the slope of one of the highest of the chain of the Blue Ridge in Alabama, it commands scenery that is unapproachable in the State. Nature could not have formed a more beautiful place for man to build a city or given greater natural advantages. The natural drainage is most thorough and complete, while in addition the city is preparing a system of underground sewerage. *A more delightful and invigorating climate cannot be found anywhere: mild in winter, cool in summer, a thousand feet above the Gulf, with the high and broken chain, range after range in the east, Blue Mountain in the north, Coldwater Mountain in the southwest, make Anniston the coolest, healthiest and most attractive of any city in the South.* It has the richest agricultural country surrounding and tributary to it in the State, to support a manufacturing and mercantile population. The mountain sides will grow the grape and every kind of large and small fruit to perfection, and the valleys every product of diversified farming. *It is in the heart of the richest mineral district of the South, and commands the great fields of brown hematite ores on which the great and successful manufacture of iron must in the end depend for quality and profit in every branch of most skillful and best manufactures of iron and steel.* It has tributary to it the best and most extensive pine forests in North Alabama, that are reached by roads owned and controlled by Anniston citizens, while it has secured to its industries the very best coal mines and coking coal in Alabama. There is no city in America, in proportion to population, that has the manufactures of Anniston, or employs as many working men, or does a larger mercantile business. The industries already in full and profitable operation in Anniston are the **two Woodstock Furnaces** producing six hundred tons of Standard Car Wheel and Malleable Iron per week, and the **two Clifton Furnaces**, tributary to Anniston, producing nearly as much more. The **Car Works** are fully employed turning out forty cars per week, and are introducing new machinery and larger engines to increase their capacity to twenty cars per day. The **Rolling Mill and Car Wheel Foundry and Steam Forge** are among the largest in the South, of a capacity of two hundred wheels, a consumption of 120,000 pounds of metal per day, exclusive of the Rolling Mill and Steam Forge. These works are being enlarged to meet the increasing demands upon them. The **Cotton Factory** is one of the largest in the South, containing 11,700 spindles, and is running to its full capacity, while the foundry of **Murray & Stevenson**, and machine shop of **Pindar & Co.**, and planing mills of **Miller & Smith** and **Farrar & Co.** employ a large number of men and are crowded with work. The new industries that are now under way and provided for will within the next twelve months **Add Four Thousand Additional Working Men to Anniston's Population**. Two of the **Largest Iron Furnaces in the South**, capable of producing two thousand tons of iron per week, are progressing rapidly, and one of the **Largest and most complete Pipe Foundries in the world for the production of Gas and Water Pipe** is under construction,—it will employ nine hundred men.



NORLE STREET—ANNISTON.

The **Steel Bloomery**, for the production of Steel Blooms, is nearly completed, and the new **Fire-Brick Works of Taylor & Sons** are in operation. The **Ninety-Inch Morse Cotton Compress**, with its warehouses, has been completed, and is receiving cotton. Forty thousand bales, it is estimated, will be secured to Anniston from the territory that its system of railroads have opened up. The completion of the **Anniston & Cincinnati Railroad** during the present year, that will be owned and controlled by Anniston's citizens, opens up new territory and forms a *New and Shorter Grand Trunk Line to Cincinnati and the great Northwest, and to the Southwest via New Orleans and Shreveport.*

It is only the profits of business and labor that can add to the wealth of a community, add to or maintain the value of real estate, and add to the prosperity of its people. Having this in view, every industry and business in Anniston is established on a *profitable* basis. All its merchants are doing a large and profitable business, far larger than they prepared for or anticipated; it is the same with the manufacturers, while *not a dollar of debt has been created*, either by issue of a bond or placing of a mortgage on any of its old or new industries, leaving their earnings free from fixed charges that must be paid in times of depression as well as of prosperity. *To the investor, either in business, manufacturing or real estate, nowhere else are presented opportunities as safe, secure and certain as at Anniston, or where they can rest on as healthy and solid foundation.* It has trunk line railroad communication with all parts of the United States, and freight rates with the most favored of Southern cities. Two lines of railroads are owned and controlled in the interest of Anniston by its own citizens. *It has the best system of Water Works*, with the purest well water from three hundred feet below the surface, drawn from white quartz sand and gravel, and distributed through the city, with a pressure of 100 pounds to the inch, from a reservoir always full, protecting the city against fire and giving it the lowest rate of insurance. *The city is practically free from debt, and taxation limited to one-half of one per cent.* The means for education are the very best. Public Schools of a high grade are provided. One of the finest and best institutes for Young Ladies has been opened, and a College for Boys and Young Men, to which a School of Technology and Chemical Assay Laboratory have been added, is now nearly completed, and the best of teachers and professors secured for both. There are Churches for all denominations, and Hotel Accommodations that are not surpassed in Europe or America. The **ANNISTON INN** provides the quiet and comfort of the most luxurious home. The streets are wide, macadamized, and rolled hard and smooth for pleasant drives. **STREET CARS AND DUMMY LINES** are being built to different parts of the city, and the **ELECTRIC LIGHT** service enlarged and improved, leaving nothing undone to promote the comfort of its citizens and maintain and increase the value of their property and profits of their business.

The **Anniston City Land Company**, or the **Bureau of Information**, will give any information desired when applied to, and invite all wishing a charming place in which to live, to do business or to make profitable investments, to visit

ANNISTON.

CONSTRUCTION DEPARTMENT

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

Allen's Factory.—The Falls Manufacturing Co. contemplate adding new machinery to their cotton (yarn) mill.

Anniston.—A grist mill will probably be started.

Anniston.—E. E. Herrod, of Calera, will move his shoe factory to Anniston.

Anniston.—There are prospects of a spoke and handle factory being moved to Anniston.

Anniston.—The contract to erect the buildings for the Barbour Machine Works, lately mentioned as to be moved from Eufula to Anniston, has been let to Frisel & Neely.

Ashville.—D. E. Cason has started the manufacture of shoes, harness and saddlery.

Bessemer.—The Bessemer Land & Improvement Co. will build a dozen or more cottages, to cost from \$1,000 to \$1,500 each.

Bessemer.—Leopard & Chatman are building a cider and vinegar factory.

Birmingham.—The Southern Foundry & Manufacturing Co. and the Alabama Iron Works have consolidated as the Alabama Iron Works. They have let the contract for an additional foundry 50x100 feet. Henry Behren is president.

Birmingham.—The contract to build an addition to the First Baptist Church has been let to Davis & Bro.

Birmingham.—John Douglas has formed a company to manufacture engines on a small scale. Will soon erect their plant.

Birmingham.—The Alabama Great Southern Railroad Co. (office, Cincinnati, O.) will improve their road bed in Alabama, replace iron rails with 60-lb. steel rails, &c.

Birmingham.—A school and a church for the Methodists are reported to be built at East Birmingham. The East Birmingham Land Co. can probably give information.

Birmingham.—The Hughes Lumber Co. will rebuild their planing mill reported last week as burned, and probably on an enlarged scale.

Birmingham.—The Edison Electric Illuminating Co. will hold a meeting March 1 to consider: 1. Increasing their capital stock from \$75,000 to \$100,000; 2. Issuing not more than \$30,000 of bonds; 3. Increasing the capacity of their plant.

Birmingham.—There is some talk of a trunk factory being started at Elyton.

Birmingham.—The Birmingham Pipe Works will erect a two-story brick building, 32x116 feet.

Birmingham.—The Iron Age Publishing Co. have reorganized, with J. L. Watkins as president, and have increased their capital stock.

Birmingham.—The East Birmingham Land Co. will soon commence work on twelve cottages.

Birmingham.—The Birmingham Mining & Manufacturing Co. are erecting six lime kilns at Gate City.

Brewton.—The Peters Lumber Co., previously reported as to enlarge their lumber mill, will probably increase the capacity of the mill from 40 M feet to 130 M feet daily, and add a shingle and lath mill.

Centre.—John Tyron, of Cross Plains, has contracted to build a church for the Methodists.

Citronelle.—D. Devol, reported last week as erecting a box and wood-working factory, is at present building a saw mill and box factory, and will add wood-working machinery afterwards. He wants to correspond with manufacturers of wooden bowl machinery.

Cross Plains.—Woolum & Son have started the manufacture of washing machines and ladders.

Cullman.—A company has been organized to build brick works, with J. H. Moore, of Birmingham, as president. They have ordered machinery, and will build at once. The capacity will be 12,000 daily.

Dadeville.—The Methodists will build a church.

Decatur.—The contract for macadamizing the streets has been let to H. C. Darnell, of Greencastle, Ind., at \$1.75 per yard.

Decatur.—The erection of the electric light plant at The Tavern (hotel) has been completed.

Decatur.—The Young Men's Christian Association have purchased a site for their building, previously reported.

Decatur.—Irmis & Walker have contracted to erect a large three-story brick building for S. H. Grubers.

Decatur.—The Decatur Mineral & Land Co., previously reported as to improve their property, will erect a block of three-story buildings.

Decatur.—Thirteen dwellings are reported to be built at Moulton Heights. G. A. Nelson can give full particulars.

Decatur.—The Decatur Artificial Stone Co., previously reported, are now building their works.

Decatur.—It is reported that J. S. Bryan & Co., of New Berne, N. C., will build forty cottages.

Decatur.—The Decatur Pressed Brick Co., have purchased fifty-four acres of land for their works, previously reported.

Gadsden.—Owen T. Holmes, of Birmingham, representing a syndicate of capitalists, has purchased 40,000 acres of coal lands. He has, it is stated, formed a company to open mines, build coke ovens, construct railroads, &c.

Gainesville.—Efforts are being made to secure the erection of a cotton factory. C. H. Allen can probably give information.

Goodwater.—R. W. Lee & Co. are developing the stone quarries reported last week, and are preparing to build a short railroad.

Gravella.—G. W. Wilcox & Co. are building a saw mill with a daily capacity of about 50 M feet. They have purchased a large tract of pine timber land.

Huntsville.—Plans will soon be prepared for the government building. It will be of brick, two stories, 50x123 feet.

Huntsville.—A \$200,000 building and loan association is reported as being organized.

Ingleton.—T. L. Fossick & Co. and others have incorporated the Fossick Quarrying, Mining & Manufacturing Co., capital stock \$150,000, to operate quarries and mines in Colbert and Franklin counties.

Jasper.—It is reported that the Alabama & Tennessee Coal & Iron Co., of Florence, are preparing to build several hundred coke ovens. There are rumors of a furnace and a rolling mill to be erected also.

Jasper.—The Jasper Land & Improvement Co., capital stock \$300,000, has been organized with Joseph J. Johnston, of Birmingham, as president; L. B. Musgrove, vice-president and general manager, and J. M. Barwell, secretary and engineer. The company own 5,000 acres of land, and state that one-half of proceeds from sale of land will be used in building up manufactories.

Lively.—Willaner & Koennecker, previously reported as building a beer brewery, will put in ice machinery with a capacity of from 5 to 8 tons. They want to purchase second-hand ice machinery; also an ice machine with a capacity of from one to three tons.

Mobile.—The Mobile county courthouse, reported last week as burned, will soon be rebuilt. The loss was \$50,000.

Mobile.—The Stockton Lumber Co., of Stockton, have purchased an old saw mill near Mobile, and will rebuild it, and contemplate adding a planing mill and dry kilns. Will probably want a new boiler and engines. Will build a tram road 6 miles long.

Mobile.—The Mobile Coal Co. will rebuild their saw mill (for kindling wood), reported last week as burned, and will want saw machinery and hoisting apparatus, and a small quantity of iron roofing and iron sidings for the building.

Mobile.—J. E. Simpson, of New York, is prospecting, it is said, with a view to building a large dry dock.

Mobile.—A clothing factory has been started by the Alabama Manufacturing Co.

Montevallo.—It is reported that the Montevallo Coal & Transportation Co. will put in some new machinery at their mines and make other improvements.

Montgomery.—It is reported that the Alabama Midland Railroad Co. will receive bids for building their road.

Muscadine.—H. M. Martin and associates will shortly erect brick works.

Oxanna.—The Oxanna Building Association has been formed, with B. F. Sawyer as president. Will, it is said, soon commence work on a number of houses.

Oxford.—G. W. Eichelberger is thinking of forming a stock company to manufacture brick, tiles, sewer pipe, &c.

Oxford.—It is rumored that a woolen factory will be started in the building erected by the South Anniston Land Co. for a stove foundry.

Oxmoor.—The Eureka Co. are building several short branch lines of railroad.

Ozark.—B. G. Brown, of Skipperville, is negotiating for machinery to start a brickyard with a daily capacity of 20,000 brick.

Ozark.—A saw mill is being erected two miles from Ozark by C. M. Bailey & Co.

River Bend.—Harvey Bros. are building a marble mill and will develop quarries.

Talladega.—The name of company lately mentioned as to be formed by J. M. Sullivan and others to develop their gold mines is the May Virginia Gold Mining & Milling Co. Their capital stock is \$500,000. Mr. Sullivan is president; G. W. Haskell, vice-president; M. Ashley, secretary, and J. H. Everett, treasurer.

ARKANSAS.

Argenta.—J. J. Bourke will develop coal lands, and is preparing to sink a shaft.

Bear.—The Waitz Process & Reduction Co., capital stock \$300,000, has been incorporated to erect reduction works, with R. R. Waitz, S. B. Davis, Frank G. Sargent, R. B. Fulton and others as incorporators. Mr. Waitz is president.

Benton.—The Dixie Stoneware Co. has been organized with James H. Shoppach as president; R. E. Brents, vice-president, and John L. Parham, secretary and treasurer.

Bentonville.—The name of the \$200,000 stock company reported last week as to start an evaporating and canning factory is the Bentonville Evaporating & Canning Co. Their capacity will be 800 bushels fruit and 20,000 cans daily.

Boonsboro.—The Case Hill Canning & Evaporating Co., capital stock \$100,000, has been organized, and will start the canning factory reported last week; also, an evaporating factory.

Centre Point.—A company has been formed to build a telephone line to Lockesburg.

Fort Smith.—A wagon factory is reported as being erected by William Siegert.

Fort Smith.—The Fort Smith Ice & Coal Co. will increase their capital stock from \$34,000 to \$50,000, and increase the capacity of their ice factory from 10 to 20 tons daily.

Fort Smith.—The Fort Smith Gas Co. will greatly enlarge their works. Work will be commenced as soon as the weather will permit.

Fort Smith.—The Fort Smith Electric Light Co. contemplate greatly enlarging their plant.

Fort Smith.—The Fort Smith Canning Co. will increase their capital stock from \$50,000 to \$65,000, and will erect additional buildings and put in machinery for manufacturing cans.

Fort Smith.—Cobbe, Eller & Co., of LeMars, Ia., are negotiating with the Chamber of Commerce to build a soap factory.

Golden City.—It is reported that two 20-ton smelting plants to use the Waits process will soon be erected. If true, R. R. Waits, of Hot Springs, can give information.

Golden City.—It is reported that another company is being formed to develop mines.

Hot Springs.—E. A. Shippey, lately reported as to erect a 40-ton smelting plant, will, with Messrs. Read, Miller and McCulloh, erect the plant at their Jonestown mine.

Hot Springs.—The Arkansas Mining & Smelting Co. state that they will erect their smelting plant, lately mentioned, this spring. They will use the Waits process.

Huntsville.—It is reported that the contract to build twenty miles of the Great Eastern & Pacific Railroad has been let.

Little Rock.—It is reported that the Chicago, Hannibal & Springfield Railroad Co. will extend their road from Springfield, Mo., to Little Rock.

Little Rock.—Mr. Curtis will start a broom factory.

Little Rock.—The Kansas & Texas Coal Co. (office, St. Louis, Mo.) have increased their capital stock to \$2,000,000.

Little Rock.—The Congregational Church, Dr. Read, pastor, will, it is said, soon erect a new edifice.

Little Rock.—A new building is reported to be built by the First Baptist Church, Rev. J. K. Pace, pastor.

Little Rock.—William W. Schermerhorn, of Corsicana, Texas, has been making investigations with a view to starting works to manufacture gypsum.

Little Rock.—B. J. Bartlett has prepared plans for a \$6,000 brick residence for C. W. Clark and plans for a \$6,000 residence for Dr. Bentley.

Little Rock.—J. F. Townsend has plans prepared to erect a \$15,000 brick residence.

Little Rock.—Fred. Roesch will probably soon organize the stock company to enlarge and operate his wagon factory, previously reported.

Little Rock.—The Muskegon Lumber Co., capital stock \$400,000, has been incorporated to manufacture lumber, shingles, laths, &c., with Charles B. Field, John W. Moon and A. V. Mann as directors. Mr. Field is president. They have purchased immense tracts of timber lands and will build several mills.

Little Rock.—Adolph Hamberg, Myer Pollock, Philip E. Brugman, Louis L. Mivelaz and John Calef have incorporated the Citizens' Incandescent Electric Light Co., capital stock, \$50,000. Mr. Pollock is president.

Newport.—William B. Empie & Co., reported last week as building a lumber mill, will add a shingle mill within three months.

Ozark.—A company is being formed to start a canning factory. W. W. Jennings can give information.

Pine Bluff.—The O. D. Peck Lumber Co. contemplate increasing their capital stock, but have not yet fully decided.

Rogers.—Efforts are being made to form a \$10,000 stock company to build the water works reported last week and lime works. H. A. Oakley can give information.

Texarkana.—Prof. Hayes will, it is said, purchase timber lands for parties who will build a lumber mill.

Van Buren.—The Van Buren Canning Co. will increase their capital stock to \$15,000.

FLORIDA.

Apopka.—A cigar factory will probably be started.

Apopka.—A saw mill is being erected by Emerson & Starbird. The daily capacity will be 7,000 feet.

Apopka.—The name of the company previously mentioned as formed to manufacture orange wine is the Orange County Wine Co. F. W. Balch is interested. The authorized capital stock is \$100,000.

Bonifay.—The Bonifay Manufacturing Co. talk of building a canal.

City Landing.—A sawmill is being erected by William H. Larimore.

Clear Water Harbor.—The saw and planing mill lately reported is being erected by Coachman & Sloan.

Clermont.—A town is being laid out on the Orange Belt Railroad, five miles from Clermont. It is to be called Sheridan.

Dade City.—A saw mill is to be erected near Dade City. S. J. Temple can give information.

Dayton.—A machine shop has lately been erected by Ballough Bros. & Mansfield.

Federal Point.—There are prospects of a company being formed to build a hotel.

Key West.—Edwardo H. Gato will build a large cigar factory to cost \$200,000. It will be of brick, stone and iron, with a capacity for 1,000 hands. Plans have been prepared.

Lake City.—A saw mill is being erected on the land of B. S. Roberts, near Lake City.

Lawtey.—N. Dunham has lately purchased timber lands in South Florida.

Millview.—The Michigan Lumber Co., previously reported as buying the plant of the Seminole Lumber Co., are adding some new machinery.

Oakland.—An ice factory is reported to be erected.

Orange City.—It is rumored that a \$20,000 hotel will be built.

Orlando.—The Presbyterians will build a church at once.

Orlando.—The Orlando & Winter Park Railway Co. will complete their street railroad at once.

Orlando.—The Orlando Water Co. are extending their mains.

Osceola.—Water works are projected.

Palatka.—H. Brown, of De Land, has erected brick works and will add machinery to manufacture pottery.

Quincy.—It is stated that two cigar factories are to be started.

Sanford.—It is reported that the Standard Oil Co. will build a large hotel.

Sanford.—The Sanford Loan & Trust Co. has been organized, with J. F. Welborne as president.

St. Augustine.—The contract to build the jail, previously reported, has been let to A. H. Cornish, Jr.

Tallahassee.—The Standard Oil Co. will build a warehouse.

Tampa.—A city hall and market-house are contemplated. When anything is done the mayor can give information.

GEORGIA.

Americus.—It is rumored that the Americus Investment Co. have purchased the property of Harrold, Johnson & Co.

Americus.—The American Contract Co., of New York, have contracted to build gas works, and will commence work at once. They will form a local stock company.

Athens.—The students at the State University will build a club house to cost fully \$20,000.

Athens.—Financial arrangements have been made by which the Macon & Covington Railroad will be, it is said, completed at once.

Athens.—It is stated that Phinizy & Nicholson will build a large fire proof cotton warehouse.

Atlanta.—A street railroad to be built in North Atlanta is projected.

Atlanta.—The Board of Education have purchased a site for the \$15,000 school building reported last week. Plans will be prepared at once.

Atlanta.—It is reported that a party from Buffalo, N. Y., will erect works to manufacture wood-working machinery. If true the secretary Chamber of Commerce can probably give information.

Atlanta.—It is stated that Henry W. Grady will make efforts to secure the erection of an industrial home for girls to cost \$50,000.

Augusta.—The Augusta National Exposition Co., previously reported, have purchased a site for their buildings.

Augusta.—The hall reported last week as to be built by the Young Men's Christian Association will cost about \$50,000.

Brunswick.—M. Michelson will erect a two-story building on Union street to cost \$10,000.

Canton.—G. F. Neigole, of Atlanta, has leased and will probably develop the Kellogg gold mines.

Cartersville.—The R. H. Jones & Sons Manufacturing Co. will increase their capital stock from \$35,000 to \$50,000 to enlarge their wagon factory.

Clarksville.—The Soque Woolen Mills have increased their capital stock, and will add the manufacture of cotton goods.

Columbus.—The Pearce Cotton Factory will add 8 looms.

Columbus.—It is rumored that the Eagle & Phoenix Manufacturing Co. will soon begin work on their No. 4 cotton mill, previously reported.

Columbus.—W. Holley and J. A. Hughes will reopen their broom factory.

Dalton.—The Southern Steel Works, of Chattanooga, Tenn., write us in regard to the report referred to last week that their works will be removed to Dalton, that nothing is definitely settled as yet.

Gainesville.—John A. Smith, P. N. Parker, J. W. Olin, S. C. Dunlap, W. S. Williams and others have incorporated the Gainesville Improvement Co. Their capital stock is \$20,000, with privilege of increasing to \$200,000. The company is privileged to build street railroads, hotel, factories, etc., develop mines, etc.

Gainesville.—Allen D. Chandler, John A. Smith, James W. Bailey, C. C. Sanders and others have chartered the Gainesville Light Co. to build gas works, erect electric light plant, etc. The capital stock is \$20,000.

Gainesville.—J. H. Butt, H. H. Perry, R. Palmour and others have chartered the Gainesville Fair Association, capital stock \$10,000.

Griffin.—Andrew Bates contemplates starting a canning factory and wants to purchase machinery.

Jasper.—The Franzeska Mining Co., of Columbus, will soon commence developing their ochre mines, previously reported.

Macon.—Proposals for completing the market-house will be received until February 10 by Alexander Proudfoot.

Macon.—The Progress Loan, Improvement & Manufacturing Co., previously reported as incorporated, will soon be organized. Henry Horne and Joseph Dannenberg are interested. The capital stock of the company is \$500,000.

Marietta.—The American Marble Co. are preparing to enlarge their saw mill and make other improvements.

Milledgeville.—There is talk of bottling works being started. If anything is done the mayor can probably give information.

Nebula.—John F. Flourney and others, of Columbus, Ga., contemplate building a summer hotel.

Newnan.—The name of the company previously reported as being organized to build a cotton factory by R. D. Cole, Sr., and others, is the Newnan Cotton Mills. The capital stock will be \$60,000. About 5,000 spindles will be put in at first.

Newnan.—The Foster Car Coupling Co., previously reported, have organized with Lavender R. Ray as president; John R. Wilkinson, of Atlanta, vice-president, and James H. Shelnut, secretary. They contemplate erecting a car and implement factory.

Rockmart.—L. Vinton & Sons, of Centre, Ala., previously reported to build a saw mill, will move their mill from Centre to Rockmart about May.

Rome.—Work has been commenced on the Methodist church, previously reported, by the contractor, Mr. Tyson, of Anniston Ala.

Rome.—The Rome Brick Co. have put in a new 100 horse-power Corliss engine.

Tifton.—H. H. Tift is building a large dry kiln. He has recently purchased 10,000 acres more of timber lands.

Thomasville.—A canning factory is projected.

West Point.—The Alabama & Georgia Manufacturing Co. contemplate adding to their cotton factory 52 looms and 3,000 spindles.

KENTUCKY.

Ashland.—Col. Forbes has made a proposition to build the water works previously reported.

Covington.—A bill will be introduced in the legislature to authorize the Reservoir trustees to issue the additional \$400,000 of bonds for completing the water works, previously reported.

Frankfort.—Bills have been introduced in the legislature to incorporate the Louisville District Telegraph Co., capital stock \$5,000; the Kentucky, Tennessee & Southern Railway Co.; the Jellico Mining Co., capital stock \$2,000,000, with E. C. Thornton and M. E. Thornton as corporators; the Mayfield & Lynnvale Gravel Road Co.; the Pennsylvania & Kentucky Iron & Coal Co.; the Bowling Green Improvement Co.; the Bowling Green Steam Cable Railway Co.; the Louisville Public Warehouse Co.; the Leitchfield & Green River Railroad Co.; the Mulhatton Mining Co.; the Central City Water Co.; the Jellico Coal Co.; the Hancock Storage & Warehouse Co.; the Paducah Water Co.; the Bowling Green Real Estate, Contract & Improvement Co.; the Twelve Mile & Alexan-

dria Turnpike Road Co.; the Bell county Coal & Mining Co., capital stock \$500,000, with Vincent Baren, of London, Ky., M. S. Moss, Pineville, and M. S. Barke, J. S. O. Neale and H. V. Loving of Louisville, as corporators; the Henderson & Knoxville Railroad Co.; the Cumberland & Mississippi River Railway Co.; the Louisville, Hardinsburg & Western Railway Co.; the Richmond, Irvine & Beattyville Railroad Co.; the Paducah & Jackson Railway Co.; the Paris Street Railway Co.; and the Globe Hemp Co.

Hardinsburg.—Robinson & Spellacy have contracted to grade part of a railroad.

Lexington.—Robinson & Scott, reported last week as purchasing machinery to manufacture check registers, will be known as the Lexington Model & Machine Works. They will manufacture electrical supplies.

Louisville.—The Phoenix Storage Co., previously reported as erecting a large five-story warehouse, are preparing to erect another building on Main street to cost about \$50,000.

Louisville.—The Butterweck & Etheridge Furniture Co., capital stock \$25,000, has been chartered to manufacture furniture. Louis Butterweck is president, and James J. Etheridge, secretary and treasurer.

Louisville.—A company is to be formed to build a belt railroad.

Newport.—M. V. Bostain and W. J. Kennedy have incorporated the Carlisle Milling Co., capital stock \$15,000.

Newport.—The capital stock of the Old Seventy-Six Distillery Co. has been increased to \$75,000.

Owensboro.—The Owensboro & Indiana Bridge Co. are making the preliminary arrangements for their bridge across the Ohio river.

Paris.—A bill has been introduced in the legislature at Frankfort to authorize Paris to build water works and a sewerage system.

Pineville.—J. F. Slusher has recently purchased coal lands.

Richmond.—Frank Adair has leased the Richmond Gas Works and will extend the mains.

Shelbyville.—The Citizens' Bank will at once erect a two-story bank building 21x65 feet, to cost about \$7,500.

LOUISIANA.

Baton Rouge.—Smedley & Wood, of Dubuque, Iowa, previously reported as contracting to build water works, are preparing for active work.

New Orleans.—The city council will appropriate \$2,500 to build a bridge across the St. Bernard canal.

MARYLAND.

Annapolis.—A bill has been introduced in the legislature to incorporate the Waverly Water Co.

Annapolis.—It is reported that New York capitalists will start a canning factory near Annapolis. W. W. Hawkins can probably give information.

Baltimore.—The R. Tynes Smith Can Co. has been incorporated to manufacture cans, gasoline firepots, solder and other canners' supplies, by R. Tynes Smith, Walter Snyder, Jesse T. Ely, Theodore H. Nagle and Charles W. Baker. The capital stock is \$60,000. They have purchased the works formerly owned by Smith & Wicks.

Baltimore.—The Edison Illuminating Co., reported last week, have organized with Thomas J. Shryock as president; William A. Dunn, vice-president and general manager; Morris P. Stevens, secretary, and John H. Fowler, treasurer.

Baltimore.—Proposals for the joiner work and wood flooring, hardware, glass and polishing at the new postoffice building will be received until February 21 by Will. A. Freret, Washington, D. C.

Baltimore.—The Faith Reformed Church are negotiating for a site to erect a building. Rev. D. P. Lefevre can give information.

Baltimore.—The Baltimore Carriage & Toy Co., capital stock \$12,500, has been incorporated by George F. Prechtel, Edward A. Prior, Charles A. Hilgenberg and others.

Belair.—James P. Beale has erected a canning factory near Belair.

Castleton.—A canning factory is contemplated.

Dublin.—A canning factory is to be started by George W. Jones.

Elkton.—A bill will be introduced in the Legislature to authorize the town to issue bonds to build an engine-house, purchase fire engine, &c.

Hagerstown.—The Hagerstown Improvement Association has been formed with William T. Hamilton as president.

Level.—E. H. Foard will start a canning factory.

Northeast.—The McCullough Iron Co. will put their rolling mill at Northeast in operation.

Point of Rocks.—Companies will be incorporated in Maryland and Virginia to build the bridge across the Potomac river lately reported. Joseph D. Baker, of Frederick, is interested.

Tunis Mills.—T. Tunis, J. H. White and Ernest Meire will start a canning factory.

Washington, D. C.—It is reported that a company has been formed to build a cottonseed oil mill. If true, Sydney A. Jones can give information.

Washington, D. C.—T. F. Schneider will build a number of three-story houses on Corcoran street.

Washington, D. C.—J. W. Ames has started the manufacture of shirts.

Washington, D. C.—The National Pressed Brick Co. are improving their works.

Washington, D. C.—Work on the Divinity School of the Catholic University has been commenced. Mr. Baldwin, architect, can give particulars.

Washington, D. C.—A bill has been introduced in the United States Senate to incorporate the Washington & Highlands Street Railroad Co.

MISSISSIPPI.

Bogue Chitto.—The Keystone Lumber & Improvement Co. will build a telephone line 7½ miles long, and want to purchase telephones, wire, &c. Also want 300 squares of iron roofing.

Jackson.—A bill has been introduced in the legislature to incorporate the Macon, Tuscaloosa & Birmingham Railroad Co.

Meridian.—The East Mississippi Cotton Mills contemplate enlarging their capacity.

Meridian.—The Meridian Publishing Co. have put in two new presses.

Port Gibson.—The Port Gibson Cotton Mill Co., who are now preparing to put their mill in operation, expect to double their capacity. Now have 4,200 spindles.

Vicksburg.—The D. W. Florerree Ice Co. are preparing to sink another well at their factory.

NORTH CAROLINA.

Anson County.—It is rumored that Pennsylvania parties will purchase timber lands and erect a spoke and handle factory.

Asheville.—The Catholics have purchased a site to build a church and a convent. Lyman & Child can probably give information.

Asheville.—Mr. Wolsey will build a \$5,000 residence.

Charlotte.—The Charlotte Manufacturing Co., reported last week as purchasing a site for their cotton factory, have changed their name to the Alpha Mills, so as not to conflict with a company with a similar name. The capital stock is \$100,000.

Charlotte.—There are prospects of a knitting factory being started.

Charlotte.—A. T. Hill and J. B. Creighton have purchased machinery to start a broom factory.

Charlotte.—Thomas Garibaldi, C. M. Davidson and I. G. Markey contemplate starting a canning factory.

Charlotte.—J. P. Long and Mr. Schroeder are forming a company to start a candy and cracker factory. The capital stock will be about \$10,000.

Elizabeth City.—C. E. Kramer & Bro. will build a planing mill 32x50 feet, with boiler-house 15x28 feet. Will manufacture flooring, siding, &c.

Forest City.—Mr. Rice will erect a saw mill. Has purchased machinery.

Forest City.—J. B. Harrill and A. H. McFalls have contracted to grade part of the Charleston, Cincinnati & Chicago Railroad between Rutherfordton and Marion.

Franklin.—E. H. West is investigating the corundum deposits on his lands.

Gold Hill.—The Barringer Gold Mine property will probably be purchased by parties who will extensively develop it.

Gold Hill.—Messrs. Reed and Morgan are prospecting gold lands.

Hickory.—The Ohio Lutheran Synod have purchased the Mt. St. Joseph Academy and will spend several thousand dollars in making improvements.

Highlands.—The Western North Carolina Land & Improvement Co., Henry Stewart, president, are building the saw, planing and lath mill and sash, door and blind factory reported last week, and will also manufacture furniture. They contemplate building a hotel and cottages.

Hillsboro.—A company with a capital stock of \$100,000 will probably be formed to build the cotton factory previously reported. Joseph A. Harris can give information.

Kinston.—It is reported that a spoke and handle factory will be built by W. G. Herbert.

Lexington.—Wall Bros. will start the manufacture of wagons.

Littleton.—A canning factory is reported to be started soon. J. T. Patrick, Raleigh, can probably give information.

Madison.—John M. Galloway offers to furnish money, it is said, to start a pulp and paper mill.

Mooresborough.—R. C. Kennedy contemplates starting a stave and barrel factory, and wants to purchase machinery.

Murphy.—The Baptists will build a church.

Newton.—The Newton Roller Mill Co., capital stock \$10,000, has been organized to build a roller flour mill. W. P. Gaither can give information.

Norwood.—There is some talk of building a cotton factory.

Oxford.—W. B. Colyer is sinking a shaft in coal lands about 7 miles from Oxford.

Piedmont Springs.—It is rumored that a hotel will be built.

Raleigh.—Julius Lewis and others will organize a company with a capital stock of \$25,000 to build gas works. Mr. Lewis is now purchasing the necessary machinery and work on the plant will soon be commenced.

Raleigh.—W. C. Stronach and others contemplate forming a company to build the cotton factory referred to last week.

Rutherfordton.—The Idle Gold Mine is being reopened.

Salisbury.—There is talk of an ice factory being erected soon.

Salisbury.—Mills & Co. will increase the capacity of their medicine factory.

Salisbury.—A mineral water factory will be started by Littman & Lichenstein, of Greenville, S. C.

Shelby.—There is talk of forming a cooperative company to build a cotton mill.

Shelby.—Another cotton factory to cost \$100,000 is reported to be built in Cleveland county soon.

Southern Pines.—M. B. Clarke will probably start the canning factory reported last week.

Statesville.—W. D. Turner, William Wallace and others are interested in the company previously reported as being formed to build a cotton factory. The capital stock will be probably \$100,000.

Statesville.—A shoe factory is reported to be started soon.

Tarboro.—The Edgecombe county jail, reported in this issue as burned, will be rebuilt. The loss is \$20,000. Plans are wanted.

Wadesboro.—A turpentine distillery has been erected by E. S. Davis.

Wilkesboro.—There is talk of a cotton factory being erected at or near Wilkesboro.

Wilmington.—Onslow county has voted a subscription of \$50,000 to the capital stock of the Wilmington, Onslow & Eastern Carolina Railroad Co.

Winston.—The factory of the Winston Tobacco Co. has been purchased by R. B. Kerner for \$3,500.

Winston.—An effort will probably be made to form a company to build a cotton factory.

Winston.—The Southern Railway Co. have been granted the franchise to build the electrical street railroad previously reported.

SOUTH CAROLINA.

Barnwell.—M. Brown, W. H. Duncan and J. W. Woodward have received permit to build a street railroad.

Bascomville.—It is stated that efforts will be made to form a company to build a cotton factory at the Catawba Falls and a railroad from there to Bascomville.

Charleston.—The Enterprise Street Railroad Co. have asked for permit to extend their road on King and other streets.

Charleston.—The Charleston Cotton Mills have been chartered, with a capital stock of \$250,000, to operate the cotton mill. Arthur Barnwell will be president.

Cheraw.—The Cheraw Land & Improvement Co., reported last week, will erect a block of eight store buildings, the upper part to be used as a hotel.

Columbia.—The name of the company reported last week as being formed by Julius H. Walker to build a cotton factory will be the Capital Cotton Mill Co. The capital stock is to be \$100,000, and the proposed mill is to have about 4,000 spindles.

Columbia.—There is talk of forming a cooperative construction company to bid for completing the State canal.

Columbia.—The Columbia Street Railway Co. will extend their road at a cost of about \$8,000.

Georgetown.—H. A. Hamaker, of Conway, S. C., will build a saw mill, probably near the Mosquito Creek canal.

Laurens.—The Presbyterians will build a church.

Marion.—Messrs. Jarnigan and Trumble have contracted to furnish cross-ties for 5 miles of railroad.

Orangeburg.—J. G. Wanamaker and others will organize a company to manufacture patent medicines.

Piedmont.—The capacity of the additional cotton mill, reported last week as to be built by the Piedmont Manufacturing Co., will be about 12,600 or 14,000 spindles, and 445 looms.

Summerville.—A stock company will be formed to build the \$10,000 hotel lately reported. R. S. Pringle can give information.

Walterboro.—A rice mill is reported to be established.

Winnaboro.—J. H. Cumming and R. T. Matthews have formed the Winnaboro Wagon Co. to manufacture wagons &c. Are adding an engine and other machinery.

TENNESSEE.

Bristol.—The committee on water works will recommend that \$50,000 of bonds be issued to build the works, previously reported. The mayor can give information.

Bristol.—It is reported that B. Buffum & Co. will enlarge their wood working factory.

Bristol.—The Young Men's Christian Association are receiving bids for erecting their buildings, previously reported. It is to be three stories, 60x70 feet.

Bristol.—The South Atlantic & Ohio River Railroad Co. will during this year develop the brown iron ores along the line of their road.

Brownsville.—There is talk of a canning factory being started.

Buckeye.—The Pioneer Coal & Coke Co., reported last week as opening coal mines, are building a 3½ mile railroad, and will build 200 coke ovens as soon as possible.

Chattanooga.—W. L. Rice, L. B. Jones, F. Gates M. E. Redley and J. H. McLean have chartered the Pearl Laundry & Manufacturing Co. to operate a steam laundry, manufacture bags, overalls, &c.

Chattanooga.—S. K. Strother, W. H. Ellis, R. M. Penn, John B. Tidwell and Samuel Sloan have incorporated the Evening Sun Publishing Co.

Chattanooga.—It is stated that the Willingham Lumber Co. have purchased machinery for their split pulley factory, previously reported.

Chattanooga.—The contract to build the depot for the Alabama Great Southern Railroad Co., lately mentioned, has been let to H. C. Jackson.

Chattanooga.—W. A. Campbell, W. F. Hutcheson, W. L. Magill, F. W. Rood and J. A. Campbell have incorporated the Campbell Co. to manufacture furniture, lumber, &c.

Chattanooga.—The Rossville & Chienmanga Street Railway Co., previously reported, have organized with R. L. Watkins as president, and V. S. Whiteside, secretary and treasurer.

Chattanooga.—The Hamilton Lumber Co., lately mentioned as chartered, have organized with George Drumbar as president, and F. A. Alexander, secretary and treasurer. Their capital stock is \$18,000. They will, it is said, add to their present factory sash, door and blind machinery.

Chattanooga.—The Knights of Pythias contemplate, it is said, building a four-story hall.

Coulterville.—It is stated that arrangements are being made to open the McGill Creek coal mines. E. J. Williams can give particulars if true.

Columbia.—Lamb & Smith have added a large steam heating dry kiln to their furniture factory and planing mill.

Cumberland Furnace.—The Drouillard Iron Co., of Nashville, contemplate building a narrow gauge railroad 5 miles long if the Louisville & Nashville Railroad Co. (office, Louisville, Ky.) will not extend their Clarksville & Princeton branch to Cumberland Furnace.

Cumberland Gap.—It is reported that a planing mill has been started.

Dayton.—J. A. Talloss will erect a three-story brick building to cost probably \$3,000.

Dayton.—It is reported that some new machinery will be added to the planing mill of Mr. Bridgman.

Huntingdon.—A woolen mill is reported to be erected. If correct Hastings & Co. can probably give information.

Johnson City.—A planing mill is being built by John Sanders.

Jonesboro.—Markley & Thurston have put a new boiler and engine in their planing mill.

Kingston.—It is stated that Edward Shelley, of Newbern, Va., is organizing a company to build the railroad from Emory Gap to Kingston, previously reported.

Knoxville.—The Unaka Iron Co., lately reported, have purchased 200 acres of magnetic iron ore lands in North Carolina. H. B. Wetzell is secretary.

Knoxville.—J. L. Loyd, of Lebanon, Ind., is reported as contemplating moving a blast furnace to Knoxville.

Loudon.—It is reported that Mr. Furber contemplates erecting a saw mill.

Loudon.—Marble quarries will probably be opened by J. R. Dew.

McMinnville.—There are rumors of a company being formed to start a cotton mill.

Memphis.—M. Burke, J. H. Milburn, Fred B. Jones, J. W. Jefferson, J. M. Edwards and others have formed the Tennessee Brick & Manufacturing Co., to manufacture brick, tiles, &c.

Morristown.—It is rumored that Major Wood, of Bristol, will build a \$50,000 hotel.

Rockford.—The Rockford Cotton Mills contemplate adding 2,200 spindles to their mills, possibly by September 1. They now have 2,800 spindles.

South Pittsburg.—It is reported that the South Pittsburg Pipe Works are making improvements which will increase their capacity.

Strawberry Plains.—J. H. Sensabaugh will put a double stand of rolls in his flour mill.

Tate Springs.—Whitley & Co. have contracted to build a hotel.

TEXAS.

Austin.—A company have made a proposition to remove their sewing machine factory to Austin.

Austin.—The Texas Pacific Railroad Co. (office, Dallas) state that they will build a new depot.

Austin.—I. F. Pope is designing a sewerage system for the city, which the city council contemplate having constructed.

Dallas.—A mattress and bed spring factory has been started at West Dallas.

Dallas.—It is reported that the offer of a Northern party to furnish \$30,000 towards organizing a \$60,000 company to build a paper mill has been accepted.

Dallas.—The water commissioners have purchased a Holly pumping engine for high duty at a cost of \$29,000.

Dallas.—The Dallas & New Orleans Railway Co., capital stock \$5,000,000, has been chartered to build a road from Fort Worth via Dallas to the Louisiana State line. The directors are James B. Simpson, T. J. Oliver, W. C. Connor, D. M. Smith and others.

Decatur.—A street railroad is reported to be built. R. E. Carswell can give information.

Decatur.—There is talk of building gas and water works. R. E. Carswell can probably give particulars when anything is done.

Denison.—Irvin Pike, of Wabash, Ind., contemplates, it is said, starting steam tile and brick works.

Denison.—Frank Smith, J. F. Tillman and A. L. Lukens, of Roann, Ind., have been prospecting with a view to starting a planing mill and a sash, door and blind factory.

Denison.—F. B. Erwin, of Elkhart, Ind., has, it is reported, been prospecting with a view to starting a paper mill.

Denison.—It is reported that the Denison & Southwestern Railroad Co. has been chartered.

Denison.—Parties have been prospecting with a view to starting a furniture factory.

Duffau.—The Duffau Wells Co-operative Roller Mill & Gin Co. will complete their mill.

El Paso.—The Kansas, Texas & Mexican Railway Co., capital stock \$50,000,000, has been chartered at Topeka, Kansas, to build a railroad from Kansas City, Mo., to El Paso, about 1,200 miles.

El Paso.—William Crosby and associates, lately mentioned as to erect ore-sampling works, have incorporated as the El Paso Sampling Co. Their capital stock is \$30,000.

El Paso.—S. C. Slade and Smith & Fernandis will erect a two-story brick building, about 60 by 90 feet, to cost not less than \$16,000. Will put in steam heat.

El Paso.—The El Paso Street Railway Co. will extend their road at once.

Fort Worth.—Work on the new (stone) building for the First Baptist Church, previously reported, will be commenced about February 15. Rev. J. Morgan Wells can give information.

Fort Worth.—The company lately reported as being formed to erect a six story building, 75 by 100 feet, for the Board of Trade, have selected a site. E. E. Chase can give information.

Fort Worth.—The Fort Worth Tannery Co., previously reported, have secured a site for their tannery in North Fort Worth and will soon erect buildings.

Gainesville.—Brady Bros., lately reported as to rebuild their burned flour mills have contracted for machinery with a daily capacity of 250 barrels.

Galveston.—Proposals for drilling from five to ten artesian wells, from 5 inches in diameter to 24 inches, will be received until February 15 by the board of water commissioners. \$50,000 has been reserved for these wells.

Galveston.—Proposals for building the city hall and market-house, previously reported, will be received until February 22 by the committee on public property.

Granbury.—John Reichstetter is organizing a building and loan association. The capital stock will be about \$100,000.

Houston.—It is stated that the Southern Pacific Railroad Co. will soon commence moving their machine shops from Harrisburg to Houston, previously reported.

Houston.—It is proposed to form a company to build a fine opera house. T. W. House can give information.

Houston.—It is reported that about \$40,000 have been raised towards building the brewery previously reported to be built by Eckhart Bros.

Houston.—The city council will probably appropriate \$15,000 for a school building.

Laredo.—The Mexican National Railway Co. have commenced work on their iron bridge across the Rio Grande river, previously reported.

Marfa.—A New York company will develop the Home Stake silver mine, lately mentioned. J. H. Catten can give information.

McKinney.—J. R. Gough and others have chartered the McKinney Investment Co., capital stock, \$200,000.

Mineola.—The Mineola Canning & Evaporating Co., capital stock \$25,000, has been chartered by S. Zackerman and others.

Orange.—The rumor referred to last week that A. Gilmer will erect a planing mill and drying kiln is correct. He is adding some machinery to his shingle mill, and will soon build the planing mill. Has not purchased machinery.

Palo Pinto.—The Palo Pinto Coal Mining Co., capital stock \$600,000, has been chartered by W. W. Johnston and H. E. Johnson, of Strawn, and G. Z. Watkins and J. S. Scheuber, of Fort Worth.

Paris.—The Houston & Texas Central Railroad Co. (office, Houston) are considering the extension of their road from Roberts to Paris.

Pittsburg.—The Pittsburg Canning Co. is the name of the \$100,000 company reported last week as to erect a canning factory. W. H. Wakefield is president.

Roby.—The mill and gin reported last week are to be built by Mr. Glasscock, of Anson.

Rockdale.—Water works are being agitated.

San Antonio.—The San Antonio Coal Co., capital stock \$30,000, has been chartered by J. M. Gage, B. Oppenheimer, S. T. Tuttle, W. W. Tobey, W. W. Robbins and others.

San Antonio.—The Corpus Christi & Padre Island Harbor Co., capital stock \$100,000,000, has been incorporated to build a harbor at Padre Island, with Oliver A. Shepherd and Seymour Thomas, of New York, Ham P. Lee, D. M. Murphy, K. L. Walker and E. D. L. Wickes as directors.

Sherman.—John R. Carr and others have chartered the Citizens' Building & Loan Association, capital stock, \$200,000.

Sulphur Springs.—Brinker Bros. have let the contract for 5 two-story iron front buildings.

Texarkana.—The Texarkana Northern Railroad Co. have purchased tools, etc., to build their road, and will begin work as soon as the weather permits.

Waco.—The Texas Fence Co. are putting steam-power machinery in their factory.

VIRGINIA.

Abingdon.—A. P. Wilmer will start a canning factory.

Alexandria.—William Moss, of the American Electric Light Co., of New York, is making efforts to form a company to erect an electric light plant.

Allisonia.—A representative of a Western syndicate is reported as purchasing largely of mineral lands in Southwest Virginia.

Big Stone Gap.—The property in Scott and Wise counties reported last week as purchased by the Virginia Coal & Iron Co. is said to consist of about 40,000 acres of coal lands, and will be, it is said, soon developed.

Buchanan.—Charles L. Wilson contemplates starting a small canning factory and wants to purchase machinery. He also wants to purchase about 25 or 30 tons of second-hand iron or steel rails, either 18 or 16 or 12 pounds per yard, with fastenings and equipment, for a tram road.

Callaways.—The woolen mill referred to last week has not lately been erected.

Chatham.—Bids for building the water works lately referred to will be received by E. S. Reid. \$5,000 of bonds will be issued.

Estillville.—An axe handle factory is being built by J. B. Brusher and others, of Harrisburg, Pa. Will employ 25 hands at the start.

Estillville.—Kane Bros., previously mentioned as to erect a saw and planing mill, &c., write us that they will not do so at present.

Farmville.—A New York party has been corresponding with a view to erecting a spoke and hub factory.

Farmville.—The city council have appointed a committee to consider having the city lit with electric lights.

Fincastle.—W. B. Hayth will build a two-story addition, 22x50 feet, to his hotel.

Glade Spring.—A canning factory will probably be started.

Glen Wilton.—Messrs. Rinehart and Teaford, of Gala, have leased the Circle iron ore lands and will open mines. They will employ 50 hands.

Koiner's Store.—J. C. Plaine will start a canning factory.

Liberty.—G. E. Trass will start a canning factory near Liberty.

Liberty.—S. L. Hagerman will start a canning factory about 6 miles from Liberty.

Liberty.—Buck & Newsome will rebuild their planing mill, plaster mill and machine shop, reported last week as burned, and will need machinery.

Lick Run.—William B. Bean is developing an iron ore mine.

Lovely Mount.—A broom and a wood-working factory are reported to be started.

Lovely Mount.—The Radford Land & Improvement Co., have received permit to build a dam across the New river.

Lynchburg.—The name of the company recently reported as being formed by Max Guggenheimer and others to build a cotton mill, and towards which more than \$150,000 was reported as being subscribed, will be the Lynchburg Cotton Mill & Improvement Co. The capital stock is not to be less than \$100,000 nor more than \$1,000,000. Will build a belt railroad also.

Lynchburg.—The Virginia Nail & Iron Works will increase their capital stock from \$175,000 to \$200,000.

Marion.—It is rumored that the Holstein Woolen Co. will move their woolen mill from Holstein Mills to Marion.

Norfolk.—The Norfolk & Western Railroad Co. will not build the coal pier at Lambert Point, reported last week, this year.

Norfolk.—It is reported that a \$1,000,000 company has been formed in New York to purchase the cotton compresses, wharves, warehouses, steamers, &c., formerly owned by the Seaboard Compress Co., and now held by the receiver of the Exchange National Bank.

Norfolk.—The Tunis Lumber Co., of Baltimore, Md., are building the planing mill referred to last week. The mill will be 150x180 feet and will have a daily capacity of 125 M feet.

Norfolk.—It is rumored that a brewery will be built by Philadelphia parties.

Paint Bank.—Mineral lands are reported to be developed in the spring by Northern parties.

Petersburg.—Mr. Stearns, of New York, previously reported as prospecting with a view to starting a silk factory, has, it is stated, purchased a mill which he will improve for that purpose.

Petersburg.—Tappery, Steel & Delaney are preparing to add to their machine works the building of light locomotives.

Pulaski City.—The Swansea Land & Improvement Co. have a charter for building water works, and will probably build as soon as it is deemed advisable.

Pulaski City.—W. W. & M. L. Peery contemplates starting a broom factory and want machinery.

Richmond.—Finney Bros. have, it is stated, lately started a grist mill.

Richmond.—The bills previously reported as introduced in the legislature to incorporate the Norfolk Fuel & Gas Light Co.; the Wythe Canning & Manufacturing Co., and the Loudon Creamery Association, have become laws.

Richmond.—Bills have been introduced in the legislature to incorporate the Virginia & North Carolina Construction Co., with a capital stock of not less than \$50,000, and D. F. Houston, H. S. Trout, P. L. Terry and others, of Roanoke, as corporators; the Virginia Building & Loan Co., with O. T. Loehr and others as corporators; the Lynchburg Cotton Mill & Improvement Co., with a capital stock of not less than \$100,000 nor more than \$1,000,000, and Max Guggenheimer and others as corporators; the Green Springs Tramway Co.; the Wytheville Street Railroad Co.; the Wytheville Telephone Co.; the Big Stone Gap Steel & Iron Co., with a capital stock of not less than \$5,000 nor more than \$10,000,000, and William D. Jones, of Philadelphia, Pa., Charles

Keveny, of Boston, Mass., and others as incorporators; the Princess Anne County Railway Co., with a capital stock of not less than \$25,000 nor more than \$300,000, to build a railroad from the Norfolk & Virginia Beach Railroad to Princess Anne C. H., and with George R. Howell and others as incorporators; the Isle of Wight & Nansemond Lumber & Transportation Co., with a capital stock of not less than \$25,000 nor more than \$50,000, and W. F. Ferguson and others as incorporators; the Newport News, Hampton & Old Point Comfort Telephone Co.; the New River Plateau Railroad Co., with a capital stock of not less than \$200,000, and John W. Robinson, of Graham's Forge, and others as incorporators; the Greenleaf Johnson Lumber Co.; the Middletown & Capon Springs Turnpike Co.; the Loudon County & Frederick Bridge Co., to build a bridge across the Potomac river at Point of Oaks; the Bessemer Steel & Iron Co.; the Black Mountain Coal & Iron Co.; and the August Telephone & Telegraph Co., and a bill to consolidate the Petersburg Railroad Co. with the Atlantic Coast Line.

Roanoke.—R. H. Day has contracted to erect a building to be used as a postoffice.

Roanoke.—A bill has been introduced in the legislature at Richmond to charter the Virginia & North Carolina Construction Co., with H. S. Trout and others as incorporators. The object of the company is to build the Roanoke & Southern Railroad.

Roanoke.—A company has been organized to build a Masonic temple with W. F. Winch as president; J. Bunting, secretary, and W. H. Stoll, treasurer.

Roanoke.—Fishburne Bros. are putting new machinery in their tobacco factory to increase their capacity and will add more machinery during the year. They contemplate manufacturing smoking tobacco exclusively.

Staunton.—S. P. Hite has started the manufacture of patent medicines.

WEST VIRGINIA.

Hartford City.—Albert E. Smith, Howard Ferris, F. L. Stegmyer, W. H. Stegmyer and E. F. Stegmyer, of Cincinnati, O., and Charles A. Clifton, of Hartford City, have chartered the Liverpool Salt & Coal Co. to develop salt, coal and oil lands, etc. The capital stock subscribed is \$15,000.

Parkersburg.—S. F. Shaw, W. J. Keever, John Busch, Ralph Covert, J. W. Knight and others have incorporated the Park City Street Railway Co., with an authorized capital stock of \$50,000.

Parkersburg.—The Jenney Electric Light Co., of Fort Wayne, Ind., have contracted to light the city.

Wellsburg.—The Palace Horse Car Co. has been chartered to manufacture cars for carrying live stock by Joshua Rhodes, John Dalzell, William B. Rhodes and Willis Dalzell, of Pittsburgh, Pa., and William Herron, of Washington, D. C. The authorized capital stock is \$500,000.

Weston.—A company will probably be formed to start the furniture factory reported last week. When anything is done A. A. Brown can probably give information.

Wheeling.—The Board of Gas Trustees will enquire into the advisability of establishing an electric light plant.

Wheeling.—The West Virginia Natural Gas Co., reported last week as arranging to consolidate with the Wheeling Natural Gas Co., will hold a meeting February 23 to consider increasing their capital stock from \$1,000,000 to \$2,000,000.

BURNED.

Alapaha, Ga.—The gin of S. B. Downing.

Belle Haven, Va.—The Kellam Hotel; loss \$5,000.

Box Springs, Ga.—The saw mill of John Downs damaged by a boiler explosion.

Chattanooga, Tenn.—Part of the establishment of the Commercial Printing Co.

Farmerville, La.—The mill and gin of E. Roan, 7 miles from Farmerville; loss \$1,500.

Owensboro, Ky.—The pattern shop of Harry Gunther.

Palatka, Fla.—The tank factory of Mr. Jones and the wood mill of M. H. Dalton.

Ranger, Texas.—The mill and gin of J. H. Fisher.

Richmond, Va.—The shoe factory at the State penitentiary owned by the Davis Shoe Co., of Boston, Mass.; loss \$175,000. The State's loss on buildings is \$25,000.

Tarboro, N. C.—The Edgecombe county jail; loss \$20,000. Will be rebuilt.

Washington, Ga.—The gin of J. A. Smith, 4 miles from Washington.

Opening Extensive Coal Mines.

BUCKEYE, TENN., Jan. 24, 1888.

Editor Manufacturers' Record:

We are opening very extensive coal mines and building 3½ miles railroad, with expectation of putting up 200 coke ovens as soon as possible. We have tested our coal and proven it to be of superior quality for coke. THE PIONEER COAL & COKE CO. GEO. L. REIS, Gen. Man.

Enlarging Ice Factory.

SAVANNAH, GA., Jan. 23, 1888.

Editor Manufacturers' Record:

I have an ice factory here with a capacity of 12 tons daily. I am now putting in another machine, capacity 15 tons, which will make a daily capacity of 27 tons. SAM'L J. WHITESIDE, President Gorrie Ice Mfg. Co.

Planing Mill.

MT. HOLLY, N. C., Jan. 27, 1888.

Editor Manufacturers' Record:

We are to start a planing mill; 20 horsepower engine and boiler. Will be in operation in ten days. Building is frame, 45x85 feet, two stories high. Will attach other machinery soon.

DEWSTOE & PIERCE.

LEXINGTON, KY., Jan. 25, 1888.

Editor Manufacturers' Record:

We have started a factory, to be known as the Lexington Model & Machine Works. We also intend to put our attention to electrical appliances of all kinds. Our building is 125x80 feet deep, two stories, brick, with 60 horse power engine and boiler. M. P. ROBINSON, Secy.

Planing Mill.

NORFOLK, VA., Jan. 28, 1888.

Editor Manufacturers' Record:

Our company will not build a planing mill here, but the Tunis Lumber Co., of Baltimore, is now building a mill.

TUNIS & SERPELL LUMBER CO.

STRAWBERRY PLAINS, TENN., }
Jan. 27, 1888. }

Editor Manufacturers' Record:

I am going to put in one double stand of rolls in my flour mill during the latter part of next month, and will likely complete the change to a short system roller mill next fall. L. H. SENSABAUGH.

Canning Factory.

TUNIS' MILLS, MD., Jan. 28, 1888.

Editor Manufacturers' Record:

A canning factory will be started here the coming season by T. Tunis, J. H. Wheeler and Ernest Melro. Capacity 800 cases a day. P.

MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Canning Machinery.—L. E. Allen, Winston, N. C., wants information about starting a canning factory.

Canning Machinery.—Andrew Bates, Griffin, Ga., wants to purchase machinery for a canning factory and to employ a man who thoroughly understands the business.

Canning Machinery.—Charles L. Wilson, Buchanan, Va., wants to buy machinery for small canning factory.

Ice Machinery.—Willaner & Koennecker, Lively, Ala., wants to buy a second-hand ice machine in good order, with a capacity of from 5 to 8 tons daily; also a machine with a capacity of from one to three tons.

Iron Roofing.—The Keystone Lumber & Improvement Co., Bogue Chitto, Miss., want to purchase 300 squares of iron roofing.

Planing Mill Machinery.—Buck & Newsum, Liberty, Va., want machinery to rebuild their burned planing mill.

Rails.—Charles L. Wilson, Buchanan, Va., wants to purchase about 25 or 30 tons of second-hand iron or steel rails, either 18 or 16 or 12 pounds per yard, with fastenings and equipment for a tram road.

Railway Equipments.—J. W. Brown, St. James Hotel, Dallas, Texas, wants prices on equipments for a two foot gauge railroad in Maine.

Saw Mill Machinery.—The Mobile Coal Co., Mobile, Ala., want to purchase machinery for saw mill (for kindling wood) and hoisting apparatus and a small quantity of iron roofing and iron sidings for the building.

Sewer Pipe.—Proposals for 4,600 feet of salt glazed sewer pipe, 2 feet in diameter, will be received until February 8 by John B. Howard, Savannah, Ga.

Stave and Barrel Machinery.—R. C. Kennedy, Mooresborough, N. C., wants to purchase machinery for manufacturing oil or whiskey barrels. Also wants information as to where staves can be sold.

Telephones and Wire.—The Keystone Lumber & Improvement Co., Bogue Chitto, Miss., want to purchase telephones, 7½ miles of wire and other articles needed to build a telephone line from Bogue Chitto to their mills.

Traction Engines.—Homer R. Dudlee, Union Springs, Ala., wants catalogues, prices, &c., of traction engines.

Water Works.—Proposals for building water works at Chatham, Va., will be received by E. S. Ried.

Well Machinery.—E. H. Malory, Greensboro, Md., wants to purchase steam machinery for boring wells.

Wooden Bowl Machinery.—D. Devol, Citronelle, Ala., wants to correspond with manufacturers of wooden bowl machinery.

To Start Lime Works.

CAMPVILLE, FLA., Jan. 26, 1888.

Editor Manufacturers' Record:

It is our intention to start lime works in a short time. R. J. CAMP & BROS.

Will Rebuild Works.

ATLANTA, GA., Jan. 25, 1888.

Editor Manufacturers' Record:

We will at once rebuild our works. THE SOUTHERN AGL. WORKS.

Canning and Evaporating Factories in Arkansas.

PRAIRIE GROVE, ARK., Jan. 28, 1888.

Editor Manufacturers' Record:

At Bentonville, the Bentonville Evaporating & Canning Co. has been organized with a capital stock of \$30,000. W. S. Plummer & Son, of Kansas City, Mo., are to put in the new evaporator, which is to have a capacity of 800 bushels of fruit, and the cannery a capacity of 20,000 cans a day. This will introduce an industry of great benefit to Benton county.

At Prairie Grove, the Prairie Grove Canning & Evaporating Co. has been organized with a capital stock of \$10,000. Plummer & Son, of Kansas City, Mo., are to put in the new evaporator, which is to have a capacity of 800 bushels of fruit, and the cannery 5,000 cans a day.

At Rogers, the Rogers Canning & Packing Co. has been organized with a capital stock of \$10,000, and Plummer & Son are negotiating to put in an improved evaporator and cannery.

The Hico Canning & Evaporating Co. has been organized at Hico, with a capital stock of \$10,000, and are negotiating with Plummer & Son for an improved evaporator and cannery. Building is going on rapidly.

The Cane Hill Canning & Evaporating Co. has been organized at Boonsboro, with a capital stock of \$10,000, and are preparing to drive business. Washington and Benton counties, in Arkansas, are noted as the best fruit section of the State, having taken the premium for fine fruit at the Kansas City Exposition in 1884 and 1885, and at all the fairs in Missouri and Arkansas. Canning and evaporating factories are at home in such a country.

N. S. STONAS.

BALTIMORE, MD., Jan. 28, 1888.

Editor Manufacturers' Record:

The Edison Illuminating Co., of Baltimore city, capital \$300,000, has been organized, with T. J. Shryock as president; W. A. Dunn, vice-president and general manager; M. P. Stevens, secretary, and John H. Fowler, treasurer. Our purpose is electric lighting dwellings, etc., and furnishing motor power for machinery up to 25 horsepower. Office, 21 Chamber of Commerce.

W. A. DUNN.

Contemplate Enlarging Plant.

BIRMINGHAM, ALA., Jan. 28, 1888.

Editor Manufacturers' Record:

We are contemplating an extension of our plant and an increase of capital stock from \$75,000 to \$100,000. Our business is very good, and collections very fair. We have every light taken, and the demand is very good. We anticipate placing a great many lights here next summer, together with a great number of ventilating fans. We will probably light the Caldwell Hotel with 800 lights. The president of the company is Liegh Carroll.

EDISON ELECTRIC ILLUMINATING CO.

Will Increase Capacity.

ROANOKE, VA., Jan. 30, 1888.

Editor Manufacturers' Record:

We contemplate changing our business to that of manufacturers of smoking tobacco exclusively, and will increase our capacity largely this season. We are putting in new machinery now, and will continue to add to this during the year.

FISHBURNE BROS.

Canning Factory.

WAYNESBORO, VA., Jan. 28, 1888.

Editor Manufacturers' Record:

Mr. J. C. Plaine is going to build a cannery 10 miles below this place. His post-office is Koiner's Store. R. G. WRIGHT.

The Way it Works.

OFFICE OF THE BOARD OF TRADE COMMITTEE ON INDUSTRIAL AND COMMERCIAL IMPROVEMENT.

LOUISVILLE, KY., Jan. 23, 1888.

Editor Manufacturers' Record:

If any testimony were needed to the value and efficiency of the MANUFACTURERS' RECORD as an advertising medium, my own experience might furnish it. On Saturday, the 21st, the MANUFACTURERS' RECORD published a very complimentary notice of the splendidly printed book, "The City of Louisville and a Glimpse of Kentucky," just issued by the Board of Trade here for free distribution. On Monday morning when I reached my office there were 18 letters awaiting me, each referring to the MANUFACTURERS' RECORD's notice and asking for a copy. Before night the number of letters had increased to more than 30. These letters were from Illinois, South Carolina, North Carolina, Alabama, Tennessee, Virginia and Indiana. Yet the paper had been issued but one day. I expect an avalanche during the week. St. Paul, Minn., acknowledges the book to surpass any advertising publication that has yet been made in this country. The State legislature is considering a bill to establish a State Industrial Commission, with Gov. Buckner as chairman to collect a magnificent exhibit of the mineral and other natural resources of Kentucky, to be sent to the Cincinnati Exposition and thence through the North. The commission, if formed, will be liberally endowed, and a remarkable showing will be made. There is no opposition to the measure yet developed. Kentucky is rapidly advancing and 1888 will be a great improvement upon 1887. YOUNG E. ALLISON.

ANNISTON's lively evening paper, the Watchman, is very vigorously calling for more small industries, and in doing so it is doing a good thing. The whole South needs to give attention to the establishment of small industries, and Anniston especially ought to do so, because while she has many big enterprises, big furnaces, big car works and other big things, she needs many small enterprises, and we hope the Watchman will keep up the work.

H. M. ALLEN, of Eutaw, Ala., whose recent invention of a new process for preparing cotton for spinning immediately on its separation from the seeds, and thus reducing the cost of production, attracted considerable attention some months ago, is anxious to make arrangements for bringing his machine before the attention of cotton manufacturers.

MR. L. M. BATES, formerly of 243 Arch street, Philadelphia, Pa., has now moved his stock of goods to new and commodious quarters on 321 Vine street, same city, and, in addition to his usual line of wind-mills and supplies will, represent the Goulds Manufacturing Co., and carry a full stock of pumps, engines, rams, hydraulic machinery and all classes of goods which they manufacture. He will be, in fact, their representative agent in that section and solicits orders, and communications can be addressed to him, as he will furnish catalogues upon application and sell good at same prices as the factory.

JOHNSON CITY, TENN., Jan. 26, 1888.

Editor Manufacturers' Record:

We have organized the Johnson City Belt Railroad Co. F. A. Stratton, president, can give information.

J. E. CHANDALL, Treas.

Where to Get That Tariff Pamphlet.

HOUSE OF REPRESENTATIVES, U. S.

WASHINGTON, D. C., Jan. 27, 1888.

R. H. EDMONDS, ESQ.,

Editor Manufacturers' Record,
Baltimore, Md.

My Dear Friend:

I have just listened to the reading of the extracts you give from the pamphlet of Mr. C. L. Edwards, of Ennis, Texas, and regretted that when I came to ascertain from your foot-notes the publisher of this very clear and comprehensive argument in favor of national independence and Southern prosperity, you had omitted to state his name and address. Let me, therefore, pray you to state distinctly in the next issue of the MANUFACTURERS' RECORD the name and place of business of the publisher of Mr. Edwards' pamphlet, that I may be able to obtain copies for myself and be able to suggest to my very numerous correspondents where they may procure this admirable illustration of the devotion with which Southern statesmen worship the fetish of free foreign trade. WM. D. KELLEY.

[Orders can be addressed to C. L. Edwards, Ennis, Texas, or the Saturday Review Book & Job Office, Ennis.—ED.]

MR. C. R. MAKEPEACE, a leading New England mill engineer, who has given much attention to Southern cotton manufacturing, presents his views on that subject in this issue. He holds that the South possesses many advantages for this industry and gives many points of great interest.

MANUFACTURES are of advantage to a community directly and indirectly. They make profit for home capital, provide employment for home labor and gather willing tribute from the outside world for home skill and industry. Moreover, every neighboring interest is benefited by a prosperous factory, because money from a distance is brought in by the enterprise, and goes to aid every class by increasing the rate of remuneration that may be offered for work. There is scarcely a possibility of estimating the benefits to a community of a well-managed manufacturing establishment, so numerous are the ways in which those benefits are felt. There is general agreement, however, as to the positive nature of the benefit. It is the part of wisdom for the South and the State and the city of Raleigh to encourage in every way the establishment of manufactures. We now pay tribute to other communities for what we need in every day life. It is high time for us to reverse this order of things so far as to secure a reasonable share of that tribute which the world at large pays for what it wants. The only way to do so is to make things to sell, to coin our idle industry and skill into money.—Raleigh News and Observer.

That is directly to the point. It is just what the MANUFACTURERS' RECORD has preached week after week for years. The hope of the South is in building up manufactures. We believe that this can only be done by the help of a protective while so forcibly setting forth the immense value of such industries, loses tariff, but the News & Observer, no chance to denounce the tariff and all who favor it. If factories are worth as much to the South as the free-trade News & Observer says, and no one doubts the truth of these statements, is it not worth while to encourage them by that same protection which has enriched the North?

Developing Gold Mines.

TALLADEGA, ALA., Jan. 27, 1888

Editor Manufacturers' Record

We have this day completed the organization of the May Virginia Gold Mining & Milling Co., with a capital stock of \$500,000, twenty per cent. of which is paid in cash, and eighty per cent. in property. Our mines are located at Riddle's Mills, six miles from this city, and consist of 740 acres of mineral lands in a body, through which a vein of free milling quartz runs. We have developed the property assiduously since October 15, and have a steam drill working on the same. Our mill and other machinery will be in operation soon. We have developed the only true fissure veins yet found in the South. Our supply of ore is inexhaustible. We can mine and treat this ore for one dollar or less per ton. It assays from ten dollars to three hundred and over per ton. The headquarters of the company are in this city.

J. M. SULLIVAN, Pres't.

To Manufacture Drugs.

NASHVILLE, TENN., Jan. 23, 1888.

Editor Manufacturers' Record:

The Royal Chemical Co., 125 N. Market street, was chartered and organized January 12, 1888, for the purpose of doing a general drug and manufacturing business. One of the specialties is a full line of grocers' drugs and shelf goods, including baking powders, essences, flavoring extracts, oils, tinctures, blueings, pepper sauce, mustard, corn starch, etc. Geo. F. Hager is president.

C. S. MCKINNEY, Sec'y and Treas.

Water Works Projected.

ROGERS, ARK., Jan. 23, 1888.

Editor Manufacturers' Record:

Efforts are being made, with almost a certainty of success, to form a \$10,000 stock company for water works and lime works. The company contemplates putting in a 4-inch pipe for water works, a distance of about 900 yards. The elevation is about 250 yards, and will need machinery to supply from 30,000 to 50,000 gallons water per day. H. A. OAKLEY.

To Build a Hotel.

BRISTOL, TENN., Jan. 23, 1888.

Editor Manufacturers' Record:

I expect to build very early in the spring a good three-story brick hotel with all the modern improvements and latest designs in architecture. J. G. WOOD.

Will Erect Cotton Compress.

PINE BLUFF, ARK., Jan. 23, 1888.

Editor Manufacturers' Record:

We have formed a company here and will build compress this summer.

J. B. SPEERS.

Will Enlarge Lumber Mill.

BOSTON, GA., Jan. 21, 1888.

Editor Manufacturers' Record:

I shall move my mill to Boston about May 1st. Will add \$10,000 of machinery to my plant and double the output of lumber. Will build a narrow gauge railroad ten miles long for logging purposes.

S. G. CULPEPPER.

To Manufacture Artificial Stone.

MOBILE, ALA., Jan. 23, 1888.

Editor Manufacturers' Record:

I have formed a company in Mobile for the manufacture of artificial stone for building and sidewalk purposes, etc. It will be called the Mobile Artificial Stone Co. J. A. WELCH.

Will Build Planing Mill.

ORANGE, TEXAS, Jan. 26, 1888.

Editor Manufacturers' Record:

I intend to build soon a planing mill and dry kilns here at Orange. Am putting in (machine ordered) a No. 1 Hoyt & Bros. sizer. Have not as yet fully decided as to machines, etc., for planer. A. GILMER.

Building Large Saw Mill.

CURVE, TENN., Jan. 27, 1888.

Editor Manufacturers' Record:

We are building a large double saw mill right and left hand; capacity 40 M feet per day. We manufacture poplar lumber. We have three saw and one planing mills running now. I. M. DARNELL & Co.

Contracted to Build Large Tunnel.

FRANKFORT, KY., Jan. 23, 1888.

Editor Manufacturers' Record:

We have the contract for the Cumberland Gap tunnel, about 4,000 feet, and 9 miles of outside work, which will be started with machinery at tunnel at once. MASON, GOOCH & HOGE Co.

Brick Works.

SAVANNAH, GA., Jan. 23, 1888.

Editor Manufacturers' Record:

The Chatham County Brick Works have commenced machine work, and will have three "Chief" machines operated by one 25 horse-power stationary engine, and hope to be in operation within 3 months. The yard will be entirely new, and is near the city. HENRY ROBERTS, Supt.

Building Saw Mill.

GRAVELLA, ALA., Jan. 23, 1888.

Editor Manufacturers' Record:

We are building a saw mill at Gravelle, Ala. Our cut will be about 50,000 feet per day. Will be running in about one month. Have purchased a large tract of pine here. G. W. WILCOCKS & Co.

Cotton Mill Projected.

COLUMBIA, S. C., Jan. 27, 1888.

Editor Manufacturers' Record:

In view of the completion of the Columbia canal within 18 to 24 months, the capital stock of a \$200,000 cotton mill is being taken here. The enterprise is on the co-operative plan, and the stock will be paid in by monthly instalments. The mill will probably not be built before next year. ALLEN JONES.

To Manufacture Fire-Brick and Tile.

ATHENS, TEXAS, Jan. 24, 1888.

Editor Manufacturers' Record:

The Texas Fire-Brick & Tile Co. was chartered December, 1887, with authorized capital of \$50,000 and paid up \$20,000. Design manufacturing fire-brick, sewer pipe, pavement tile and other clay products. Are now erecting plant. R. V. Tompkins is president.

D. O. KOYNOR, Supt.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises, and needing machinery or supplies of any kind, will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

\$300,000 Land and Improvement Co.

JASPER, ALA., Jan. 27, 1888.

Editor Manufacturers' Record:

The Jasper Land & Improvement Co. was organized on the 25th, with a capital of \$300,000, besides the ownership of about 5,000 acres of land in and about town. Col. Jos. F. Johnston, president of the Alabama National Bank, Birmingham, Ala., was elected president of the company; L. B. Musgrove, of Jasper, vice president and general manager, and J. M. Burwell, engineer and secretary. This company propose to devote one-half of the proceeds from the sale of its lots to the building up of manufacturing industries at this place. Amount to be so given is to be \$150,000.

ASA E. STRATTON.

Smelting Plants to be Erected.

HOT SPRINGS, ARK., Jan. 22, 1888.

Editor Manufacturers' Record:

The mining interest is on a grand boom and in earnest. Professor Waitz, from Denver, Col., is here treating ores, and has made a grand success. So far he has treated the ores in the Mozambique tunnel, belonging to the Arkansas Mining Co., the average of a vein of 16 feet wide, and the results are: \$17.95 gold, \$1.60 silver. This is no assay, but a mill-run. He is making arrangements to put up a 40-ton plant at Hot Springs; also, Messrs. Shippey, Read, McCullah and Miller are erecting a plant on their Jonestown mine. The Arkansas Mining & Smelting Co. expect to erect a plant this spring to work their ores by the Waitz process. Several other companies will also put in plants.

ARKANSAS MINING CO.,

W. H. HUGHES, Supt.

Building Foundry and Machine Shop.

LAURENS, S. C., Jan. 25, 1888.

Editor Manufacturers' Record:

Mr. J. J. Pluss and myself have purchased part of the machinery run by the Myers Company, and are now putting up a foundry and machine shop convenient for shipments on all our railroads.

R. H. HUDGENS.

Roller Flour Mill to be Built.

NEWTON, N. C., Jan. 27, 1888.

Editor Manufacturers' Record:

A company is forming to build a \$10,000 hotel. The dimensions and location have not yet been decided. Articles of incorporation were this week issued to a joint stock company to build a roller flour mill. Capital, \$10,000; 100 shares, \$100 each. Will be known as the Newton (N. C.) Roller Mill Co.

W. B. GAITHER.

Two More Canning Factories for Virginia.

LYNCHBURG, VA., Jan. 27, 1888.

Editor Manufacturers' Record:

A. P. Wilmer, Abingdon, Va., and D. S. Turner, Pedlar Mills, Va., have signified their intention through the "Virginian" to erect canneries.

VIRGINIAN.

Saw and Planing Mill.CLEAR WATER HARBOR, Fla.,
Jan. 23, 1888.*Editor Manufacturers' Record:*

Coachman & Sloan are erecting a saw and planing mill at this place.

P.

ANNISTON, ALA., Jan. 25, 1888.

Editor Manufacturers' Record:

I will have a two-story store, 35x100 feet, with basement, built on Noble street for Jos. Eros as soon as bids can be received; cost \$5,000.

L. M. WETHERS, Archt.

To Build Additional Cotton Mill.

GREENVILLE, S. C., Jan. 25, 1888.

Editor Manufacturers' Record:

The Piedmont Manufacturing Co. have decided to build a new mill at Piedmont of about 12,000 or 14,000 spindles and 450 to 500 looms, and as I shall have charge of the construction and equipment of it, I will have to abandon the building of the new steam mill at Greenville; at least, for the present. I could not undertake to build both at the same time, and my connection with Piedmont compels me to build the one there. H. P. HAMMETT, Pres.

Will Erect Planing Mill

ELIZABETH CITY, N. C., Jan. 27, 1888.

Editor Manufacturers' Record:

C. E. and J. A. Kramer of this firm will erect a planing mill upon the wharf leased by Calvin Conard, Esq., of the N. S. R. R. Co., to make flooring, siding, &c., out of his lumber. The building will be 32x50 feet, with lumber shed 32x32 feet and boiler house 15x28 feet. The name of the firm will be C. E. Kramer & Bro.

KRAMER BROS.

Building Another Mill.

HULL, ALA., Jan. 25, 1888.

Editor Manufacturers' Record:

We have a mill in operation; capacity 15 to 20 M feet per day; and we have on the ground and are putting up another mill with a capacity of 60 M feet per day. We shall also construct at once planer, dry kiln, &c.; also track three-fourths mile from main line Alabama Great Southern to mill. TUSKALOOSA LUMBER CO.

Will Remove to Decatur.

DECATUR, ALA., Jan. 24, 1888.

Editor Manufacturers' Record:

Geo. E. Smith, H. C. Higman and N. B. Hall, of St. Joseph, Mich., will move their manufactory for making fruit packages to this place soon.

B. W. BRIGGS.

C. R. MAKEPEACE & CO.
ARCHITECTS and MILL ENGINEERS
PROVIDENCE, R. I. Plans, Specifications and Estimates furnished for Cotton and Woollen Mills.

D. W. K. PEACOCK,
Real Estate Agent,
CARTERSVILLE, GA.
Minerals a Specialty.
Refer to THE HOWARD BANK, Cartersville, Ga.
I. W. RAWEN, Atlanta, Ga.

Manufacturers' Bureau of Fort Smith, Ark.

Invite correspondence and propositions from manufacturers with a view to locating at Fort Smith. Fort Smith is the center of an immense semi-anthracite coal, lumber, iron and cotton region, with railroad facilities giving close connections with the markets of Kansas, Texas, Missouri, Indian Territory and Arkansas. Population in 1880, 7,500; in 1886, 14,000; in September, 1887, 18,000.

NOTICE TO MANUFACTURERS.

We have a cotton mill of 8,000 spindles and 300 looms, now lying idle, which we would like to work on shares, with a practical mill man who has some capital to invest. Splendid opportunity to right man.

F. W. FRERET & CO.,
No. 6 TCHOUPOTULAS STREET,
New Orleans, La.
P. O. Box 1728.**WHO WANTS A GOOD Opportunity to Invest MONEY?**

There are many who would like to invest safely and profitably. This can be done at Long Island Cotton Mills, in Catawba county, N. C., on the Catawba river. There are about 800 spindles, 6 cards, substantial frame building on massive rock pillars, 40 by 60 feet, two and a-half stories high. It is in good running condition, and operated every day. There is a 6-saw gin and No. 1 press. Also, corn and wheat mill, bread shoals, ample water the year around. Water abundant in worst droughts.

Address
LONG ISLAND MILLS,
Monbo, Catawba County, N. C.**GREEN FOREST, Rockbridge County, Va.**

Best location in the State for a Furnace. Vast beds of rich Buena-Vista iron are at hand. Coke at less than three dollars per ton. Eight acres for a site offered FREE on the S. V. R. and the R. & A. Railroad. Best location for a Paper Mill. Supply of soft wood unlimited. Two acres FREE for a site.

Best location for a Woollen Mill. One acre FREE for a site. Large water power available. Write to

R. C. MOONAW.

West Point, Va.

A growing town. Property increasing in value. Factories invited. New enterprises exempt from taxation.

Splendidly located on York river.

Steamer lines to Europe, New York—Baltimore, &c.

Oysters and fish in unlimited abundance. Surrounded by the great fruit and trucking country of Virginia. For any particulars desired, address,

E. WILKINSON, MAYOR.

R. H. NEILSON.

R. E. MASTERMAN.

R. H. Neilson & Co.**REAL ESTATE****Abstract Agents****Bond and Stock Brokers,**

Tuskaloosa, Alabama.

Ten years' experience in handling Southern lands. Coal, iron and pine lands a specialty. Refer with permission to F. S. Moody, president First National Bank; J. H. Pitts, president Castle Hill Land Co., and Pitts' Bank.

Office up Stairs, Over Spiller's Store.

Well posted in coal and pine lands.

NOTICE

—TO—

Manufacturers.

Special attention is directed to persons engaged in manufacturing industries to the property of the South Baltimore Harbor & Improvement Co., located at Curtis Bay, about one mile southeast of Light Street Bridge, being the Southern Boundary of Baltimore City and near the extensive Car Works just completed and in operation. Particular notice of manufacturers East and North of Baltimore is called to this locality, which, besides its proximity to the Southern markets, has many advantages, such as railroad and water communications, cheap house rents, easy access to the city, &c., &c. The location is high and healthy, rising to about 160 feet above tide water. For further particulars apply to

WM. S. RAYNER,

Pres. S. B. H. & I. Co.

8 E. Lexington St

BALTIMORE.

REAL ESTATE IN A Booming Alabama Town FOR SALE.**Three Hundred Choice Business and Residence Lots in the CITY OF ANNISTON.**

This property is the best in the city, and having been bought before the boom, will be sold at prices affording investors a rare opportunity to make certain and handsome profits. Address

F. M. HIGHT, Anniston, Ala.

Gallatin, Tenn., Cotton Factory FOR SALE.

Factory is situated immediately on Chesapeake & Nashville R. R., and right in city of Gallatin, on L. & N. R. R. Factory has two horse power engine, 125 looms, with sufficient machinery to run the looms to their full capacity; never failing water for all purposes. Machinery all in good running order. All machinery automatic and of latest improved kind. Makes from 7,000 to 7,500 yards of goods per day. Looms 4-4, but arranged to make, when desired, either 3 or 5-4. There is also attached to factory merchant grist mill; in addition large double brick house, also eleven cottages for operatives. Property cost \$125,000. Will be sold at a bargain. Machinery will be sold separately if desired. There are some 50 acres of land adjoining factory. For particulars address

BANK OF GALLATIN.

Gallatin, Tenn.

A Rare Chance FOR SALE.

A well-equipped planing mill. Building, iron and brick. First floor, 80 by 100 feet; second floor, 80 by 80 feet. 40-horse-power engine and boiler, shafting, pulleys, belting, blower, one flooring machine, two turning lathes, resaw, one 12-inch Fay molder, one endless bed planer, one self-feed rip saw, one swing saw, one iron-working lathe, one band saw, one scroll saw, one Universal rip saw, one single head shaper, one 4-inch molder, one sander and lot small tools.

All this machinery and building were new two years ago, of most improved patterns, and is in perfect working order, located within 100 yards of the Union passenger depot. It affords a strictly first-class investment. Address

LOCK BOX 566,

MONTGOMERY, ALA.

Blast Furnaces Wanted.

The Athens Mining & Manufacturing Co., Athens, Tenn., are erecting \$500,000 new manufacturing improvements upon their property, and are opening, with a new railroad, the finest iron fields in the South. They desire to have one or more blast furnaces located at Athens, and make the following offers to iron manufacturers and capitalists:

1. They will donate an excellent site free of cost, and in addition will give \$10,000 cash subsidy upon closing of contract and execution of satisfactory bond for the erection, as soon as practicable, of a furnace with 100 tons daily capacity; or will donate site and subscribe for \$25,000 stock. The same offers are made proportionately for furnaces of less capacity.

2. They will lease the mines upon royalty or will deliver at furnace both red and brown ores, superior in quality to any at present mined in the South, and which will yield not less than 50 per cent. in the furnace, at say \$1.25 to \$1.50 per ton, or anyway 10 per cent. less than ores proportionately rich cost Chattanooga furnaces. They will contract to deliver any number of tons daily. Lowest freight rates will be obtained on manufactured products to markets.

The finest limestone can be had on the property for cost of quarrying.

Coke can be had at Chattanooga prices. Analysis of the ores will be furnished upon application. No place in the United States has better advantages than Athens for the cheap manufacture of superior iron.

The company reserves the right to select any one or two of such propositions as may be received.

Correspondence solicited.

R. J. FISHER, Treas. and Gen'l Man.

FOR SALE *For Sale.*

1 60 in. x 16 ft. Lathe. Nearly new.
 1 36 in. x 10 ft. Lathe. Good order.
 1 30 in. x 16 ft. Lathe. Good order.
 1 22 in. x 12 ft. Lathe. New, Star.
 1 19 in. x 8 ft. Lathe. New, Young.
 1 Planer, 36x12, and 1 36x16 ft.
 1 Planer, 24x5, and 1 22x4 ft.
 1 Pulley Lathes, 26 and 35 in.
 1 Forster's Stone Breaker. Good order.
 1 Broom Handle Lathe.
 1 Planers and Matchers.
 1 Surfacers, Band Saws, etc.
 Send for circular of New and Second-Hand Tools.

W. H. ROBERTSON,

48 South Con. J Street, CHICAGO, ILL.

SELLING OUT.

We are offering our ENTIRE STOCK of

Machine Tools
SHAFTING, &c.

at prices below factory cost, preparatory to CLOSING OUR BUSINESS in February.

Send for our lists before purchasing your Tools elsewhere, and save money.

FRASER & ARCHER,

121 Chambers Street,

NEW YORK.

A 100 horse-power Stationary Engine and two Stationary Boilers, together with fronts, grates, castings and trimmings. Said Engine and Boilers have been used, but have been thoroughly rebuilt, and are in A No. 1 order, and will be sold very low; or can attach a Mammoth Saw Mill and sell all low, and take part in good yellow pine lumber. Apply to

RICHMOND MACHINE WORKS.

RICHMOND, IND.

Second-hand Machinery in Good Order. FOR SALE CHEAP.

1 Engine Lathe, 30 in. x 30 ft.
 1 Engine Lathe, 36 in. x 24 ft. Triple Geared.
 1 " 36 in. x 7 ft. 1 Engine Lathe 18 in. x 8 ft.
 1 " each 24 in. x 20 in. and 24 ft.
 1 " 24 in. x 12 ft. bed. Fifield.
 1 " 3 in. x 25 ft.
 1 " 24 in. x 15 and 16 ft.
 1 " 28 in. x 30 ft.
 1 " 22 in. x 10 and 12 ft.
 1 each 16 in. x 6, 8 and 10 ft.
 6 " 14 in. x 6 ft.
 1 " 12 in. x 5 ft.
 1 " 15 in. x 6 ft.
 1 " 11 in. x 4 ft. and 5 ft.
 1 " 10 in. x 3 1/2 ft. Foot power
 1 Axle Lathe. Bement & Son.
 1 Brass Turret Lathe.
 1 Planer, 24 in. x 24 in. x 5 and 8 ft.
 1 " 30 in. x 30 in. x 7 ft.
 1 Planer, 36 in. x 36 in. x 9 ft.
 1 " 34 in. x 28 in. x 11 ft.
 1 Shaper, 6-in. stroke. 1 12-in. Shaper, two tables.
 1 each 12, 15, 20 and 28 in. stroke.
 1 Crank Planer. 6 Lincoln Pat No. 2 Millers.
 1 each 3 and 6 Spindle Gang Drill.
 1 each Nos. 1 and 2 Screw Machines. Wire Feed.
 1 Pratt & Whitney. Good as new.
 1 375-lb. Drop Hammer. Beecher & Peck.
 1 No. 53 Ferracute Press. 1 Nut-Facing Machine.
 10 Foot Presses, assorted. 8 Power Presses, assorted.
 10 Punching and Shearing Machines, assorted.
 1 Return Tubular Boilers, 35 H.-P.
 1 National Bolt Cutter, sizes, 1/4 in. to 1 in.
 1 Bolt Cutter, Sizes, 1/4 in. to 2 in. included. Wm Sellers & Co.
 1 each Nos. 2 & 3 Garvin Hand Millers. Good as new
 1 Horizontal Engine each 25 and 45 H.-P.
 1 ea 4 and 8 H. P. Portable Engine.
 1 Slotter 13 in. stroke.
 1 48-in. Boring and Turning Mill. Pond.
 1 2-Spindle Profiling Machine.
 1 Horizontal Boring Machine, 36 in. x 6 ft.
 1 No. 3 1/2 Stiles & Parker Presses.
 Also full line of New Machinery.
 New York Agency TAYLOR MFG. CO., Engines, Boilers, &c. Correspondence solicited.
 PRENTISS TOOL AND SUPPLY CO.,
 P. O. Box 126 No. 42 Dev St., New York City.

—FOR SALE.—
Second-Hand Machinery

One Gray & Wood Planer, made by the S. A. Wood's Machine Co.

One Six-Rolled 24-inch Planer and Matcher, Goodell & Waters.

One 20-inch Planer and 1 Matcher, Frank & Co.

Two Sweepstake Planers and Matchers, Rowley & Hermance.

Also a full line of new and improved wood-working Machines. Correspondence solicited.

Williamsport Machine Co., Limited,

Cor. West Third & West Streets. Williamsport, Pa.

FOR SALE CHEAP.

One No. 6 Buffalo Forge, with water tank for power; new.

One No. 1 Keystone Forge; second hand.

Two No. 1 Delamater Pressure Pumps, 1-inch suction, 1 1/4-inch discharge; new.

One No. 5 Blake Pressure Pump, 3/4-inch suction, 2-inch discharge; second hand.

One Power Boiler Plate Punch, punches 3/4-inch hole; second hand.

One 32-in. by 32-in. by 9 ft. Bed Planer; second hand.

One 12-inch Shaper, New Haven Co.'s make; used one month.

Complete Steam Laundry Outfit; used 3 months.

One No. 6 Friedman Injector.

One 2 horse power Lawson Gas Engine.

One Combined Engine and Boiler, 3 horse power.

One 2 horse power Vertical Engine.

One 5 horse power Vertical Engine.

One 8 horse power Vertical Engine.

One 12 horse power Vertical Engine.

One 6 horse power Vertical Marine Engine.

One 15 horse power Horizontal Engine and Boiler.

One 25 h. p. Portable Engine and Boiler, on skids.

One 8 horse power Horizontal Engine and Vertical Boiler combined.

One 8 horse power Yacht Boiler.

One 12 horse power Vertical Boiler.

One 12 h. p. Vertical Boiler, with submerged tubes.

One 50 horse power Stationary Tubular Boiler.

One 50 to 60 horse power Automatic Engine.

One lot of Gold Min'g Mach'y; used but a short time.

One latest patent Quilter; second hand.

One Beater and Lapper; second hand.

One 28-inch Picker; second hand.

Four 31-inch Cotton Cards; second hand.

Pair of Hoisting Engines, 6 1/2 x 8 in. Cylinders on bed plate 55 1/2 feet, second hand.

MACHINIST AND MILL SUPPLIES.**WM. C. CODD,**

2010 and 2012 Aliceanna Street.

BALTIMORE, MD.

ARCTIC ICE MACHINE MFG. CO.

Works, 4, 6, 8 & 10 West Street, Cleveland, O.

Manufacturers of Machines for Making Ice and for Refrigerating Breweries, Pork Houses and buildings of all kinds requiring a steady, low temperature. Over 100 of our machines now in use. Send for any particulars desired. P. O. Box 92, Cleveland, Ohio, or P. O. Box 348 Cincinnati, Ohio.

STEEL RAILS
COMPLETE OUT-FIT FOR**Logging, Mining and Plantation**

RAIL AND TRAM ROADS

Light Sections Rails and Spikes in stock.

Locomotives, Logging Cars, etc.

NEW AND SECOND HAND.

HUMPHREYS & SAYCE,

OFFICE NO. 1 BROADWAY, N. Y.

FOR SALE—SECOND-HAND**Railway Equipment**

We offer the above at low prices for cash or on easy terms or Car Trust; or will exchange for good securities. Whether you wish to buy, sell or trade, it will pay you to write us for full particulars.

THE NEW YORK EQUIPMENT CO.

Successors to Walkley & Co.

10 WALL STREET, NEW YORK.

JAMES IRVINE, Pres. L. V. WALKLEY, Secy.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the MANUFACTURERS' RECORD.

AMERICAN SUPPLY COMPANY,

Formerly Myron Fish & Co., of Valley Falls, R. I., and Kendrick Loom Harness Co., of Providence, R. I.

—MANUFACTURERS OF—

LOOM HARNESS AND REEDS.

Oak Belting, Lace and Picker Leather, and Dealers in Supplies for Cotton, Woolen and Silk Mills.

Agents for Joseph Neone's Sons'
Roller, Slasher & Clearing Cloths.

—Agents for—

RODDICK'S PATENT IMPROVED OIL CANS.

Calf, Sheep and Lamb Roller Skins, and Roll Coverers' Tools.



WIRE HEDDLES and WIRE GOODS
 Of all Descriptions.

Shuttles & Heddle Frames,
 Unequalled Facilities for Furnishing

WE HAVE

UNEQUALLED FACILITIES FOR FURNISHING

Special Notice to Worsted and Silk Mills.

We Manufacture both Worsted and Cotton Machine-Knit Mail Harness for Weaving Fine Worsted and Silk Goods. Also a Full Line of Supplies for Jacquard Looms.

Office and Salesrooms, 10 Exchange Place, Providence, R. I. —FACTORIES:— PROVIDENCE and VALLEY FALLS, R. I.

A. D. LOCKWOOD, Pres. JOHN KENDRICK, Vice-Pres. MYRON FISH, Treas. JOHN A. CARTER, Sec. JOSEPH H. KENDRICK, Gen'l Agent.

Buy "THE NEW SOUTH." HANDSOMELY BOUND IN CLOTH. PRICE, \$2.50.

MANUFACTURERS' RECORD CO. Publishers Baltimore Maryland.

The Revolving Flat Carding Engine.

Within the past three years the subject of cotton carding has received more attention than ever before among our manufacturers, for the experience of many years had proved that the English cotton spinners undoubtedly owed their success chiefly to their superior carding. Better yarn was produced

afford to be without the latest improvements in carding machinery? In these days of close competition, only the best equipped mills can keep up in the struggle for good profits.

Many different kinds of cards have appeared here of late, but it is said that undoubtedly the card that has proved the most popular, both in England and America, is the revolving flat card of the Platt pattern.

machine tools, and, with a complete plant, have already built a large number of these cards, which are pronounced by the manufacturers now using them equal, if not superior, to the English machines in every way. At present the Pettie Machine Works are turning out about five of these cards a week, but new tools now ordered will soon largely increase their capacity. They are getting up an illustrated catalogue, with all the parts of this machine numbered, for the convenience of manufacturers in ordering repairs,

out of difficult material. This machinery has a double plunger, weighs 1,100 pounds, and has a capacity of 40,000 to 50,000 brick per day, while the single worker machinery, with single plunger, has only half that capacity, or 25,000 to 30,000 brick per day.

J. W. Penfield & Son have for years been manufacturers of a full and complete line of the latest clay-working machinery, and make almost every known variety of brick and tile machinery, crushers, pug machines, etc. They take contracts for furnishing and equipping brick-yards complete with a full line of machinery and necessary appliances, including engines and boilers. They are prepared to make thorough tests of clay and report its quality and whether it is fit for the manufacturing of brick, tile and other clay products. They make a specialty of machinery for manufacturing fire brick and fire proof building material. In their new illustrated catalogue for 1888 are contained numerous plans and estimates of the most modern brick-yard, and also colored engravings, price of brick and terra cotta manufactured from their dies. The catalogue will be interesting and valuable to all brick manufacturers, and will be sent gratis to all who apply.

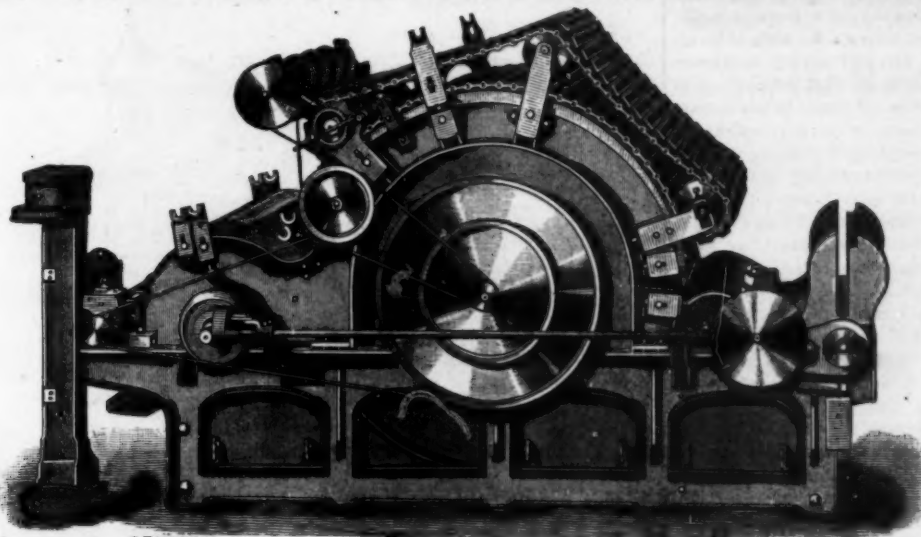
Messrs. Penfield & Son have lately received the following from one of their Southern customers:

MONTGOMERY, ALA., Dec. 13, 1887.

Gentlemen—I thought I would write and tell you how we are getting along with the No. 7 special machine. We commenced making brick on March 9th, and stopped November 10th, making 8 months, 36 days to the month, and lost 37 days. We made 4,500,000; so you can see it is a daisy, the best we ever ran. Average 36 3/4 brick per day. Truly, R. B. McDONALD,

J. M. McDONALD, Supt.

The recent Southern sales of this concern are: Capital City Brick & Tile Co., Montgomery, Ala., No. 10 D brick machine, horizontal tapering tub pug mill, with all attachments complete; capacity of outfit, 50,000 brick per day. Stevens Bros. & Co., Stevens Pottery, Ga., horizontal tapering tub pug mill, with attachments complete. Parkersburg Brick Co., Parkersburg, W. Va., No. 7 special brick machine, No. 3 crusher, elevator and attachments complete; capacity of



C. F. WHITE, SC.

REVOLVING FLAT CARDING ENGINE

in England from inferior cotton. While America was devoting her whole attention to perfecting spinning machinery, England was not only following America in this, but was carefully studying carding, and the result was the perfected Revolving Flat Carding Engine, which is almost universally used in England to-day.

Our manufacturers have at last awakened to the primary importance of good carding. A poor tool is dear even at a low cost, and the old wooden-top flat card, or "gooseberry bush," as the English derisively call it, is fast disappearing from our best mills.

That the greater outlay for revolving flat cards is more than compensated for by the better quality, greater quantity, strength and lower cost of the yarn, has already been amply

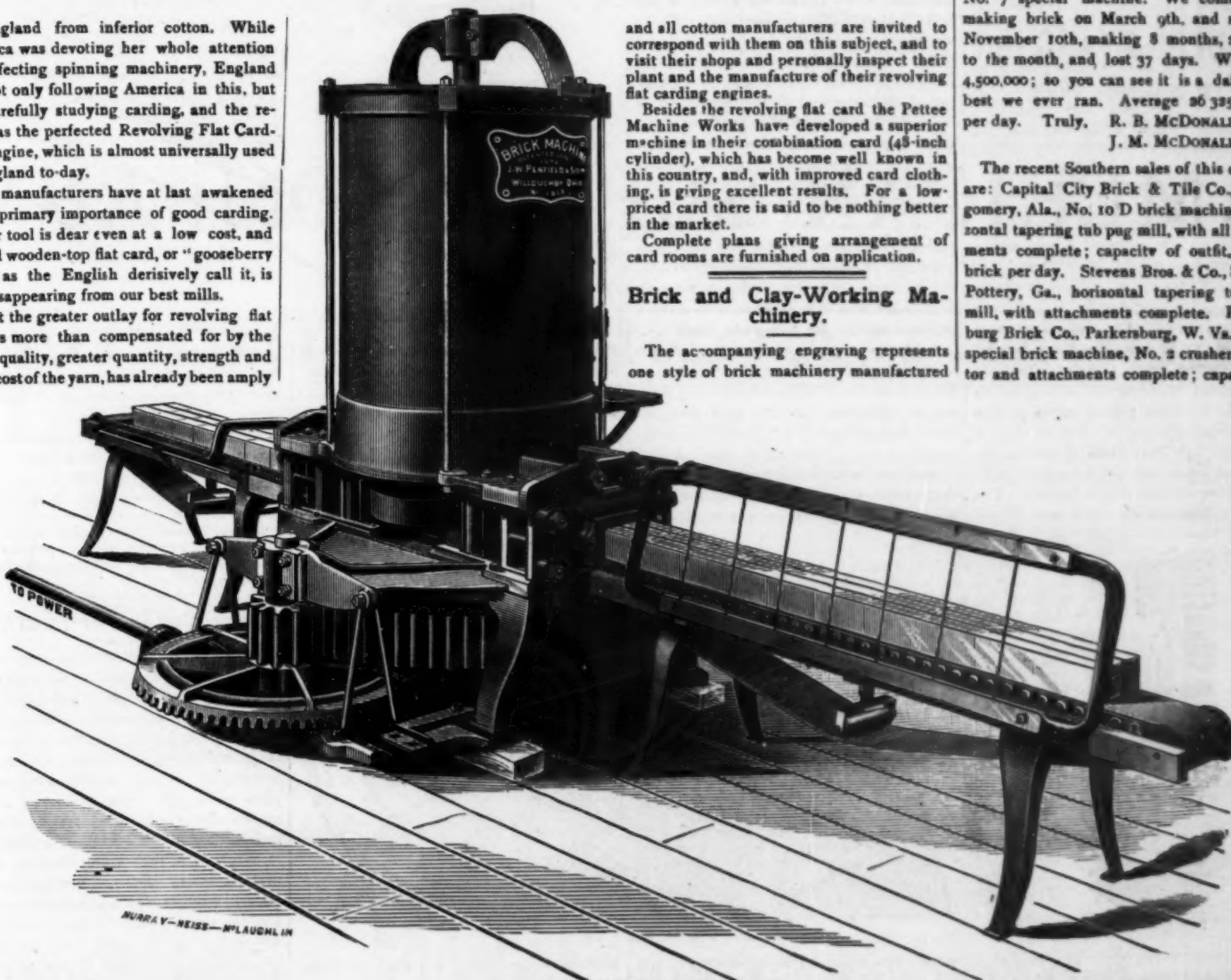
and all cotton manufacturers are invited to correspond with them on this subject, and to visit their shops and personally inspect their plant and the manufacture of their revolving flat carding engines.

Besides the revolving flat card the Pettie Machine Works have developed a superior machine in their combination card (48-inch cylinder), which has become well known in this country, and, with improved card clothing, is giving excellent results. For a low-priced card there is said to be nothing better in the market.

Complete plans giving arrangement of card rooms are furnished on application.

Brick and Clay-Working Machinery.

The accompanying engraving represents one style of brick machinery manufactured



NO. 10 T CHICAGO SPECIAL BRICK MACHINE.

proved in many New England mills. In fact, several mills in New Hampshire, where the "ten-hour law" has lately been enforced, have been able to make up entirely for the loss necessitated by shorter working hours, simply by the greater quantity of carding produced on the same floor space by the new revolving flat cards.

In view of these facts, can manufacturers

In America to-day there are about 1,200 of this variety. Our machine shops are not content to be outdone by the English, and the Pettie Machine Works, of Newton Upper Falls, Mass., have been carefully studying the manufacture of this machine for several years; have built a large machine shop especially for this purpose, and filled it with the best English and American special

by J. W. Penfield & Son, Willoughby, Ohio, one of the largest manufacturers of brick-working machinery in the country. This particular machinery is known as No. 10 T Chicago Special Brick Machine, and is the largest, strongest and most expensive machine made by this concern. It possesses great strength and very large capacity, and is especially adapted for getting best results

outfit, 30,000 brick per day. J. W. Jacobs, Wellsburg, W. Va., No. 3 corrugated crusher and stone separator, with elevator and attachments complete. W. T. Nichols & Co., Wellsburg, W. Va., No. 6 special brick machine, with attachments complete; capacity 15,000 brick per day. Johnson City Brick Mfg. Co., Johnson City, Tenn., No. 7 special brick machine with attachments; capacity 30,000 brick per day.

Improved New Bench Drill.

The accompanying cut represents a new bench drill, manufactured by Post & Co., Chicago, Ill., which is well made, and the best material used in its construction. In the bracket are three slots which connect with a pin in the arm, on which the idlers are attached. By changing from one slot to another, it will bring the belt in a direct line with the proper cone on pulleys. The table is five inches in diameter, and can be raised or lowered by lever two inches, or by the device at back of drill post, the table



IMPROVED NEW BENCH DRILL.

with lever attachment can be raised, lowered or swung out of the way entirely. The cone pulleys have three speeds. Diameter of tight and loose pulleys on counter-shaft is $5\frac{1}{4}$ inches. Distance between end of spindle and table, when latter is lowered as far as possible, is 13 inches. Will drill from one-half inch down, and to the center of a 7-inch circle. Height, 30 inches; base, 11×17 inches; weight 75 pounds. The price is but \$18.

A New Engine.

The engravings represent a new engine recently brought out by the Williams' Engine Co., Baltimore, Md. The engine is solid, strong and substantial, is well built and finely finished. The piston is an original production, and has stood the severest tests for several years; the rings are made heavy and cut into segments, with plates on the inside to break joints; spiral german silver springs are inserted into the ends of the segments to keep them expanded, the whole making a perfectly steam-tight joint, and working with very little friction. The valve is a balanced flat plate, with an ad-

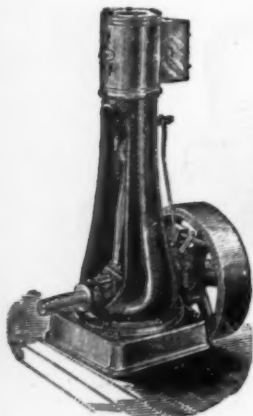


FIG. 1.

justable plate or top set. The engine is nicely balanced, runs smoothly and quietly, and all its parts are easy to get at for adjustment and repairs. These engines have been running three years without taking cylinder heads off, and how much longer they will run without needing it remains to be seen. They have, it is said, run for at least six weeks doing hard work without adjusting a bolt, nut or bearing. Further information will be furnished by the Williams Engine Co., 447 North street, Baltimore, Md.

The Bradley Upright Cushioned Helve Hammer.

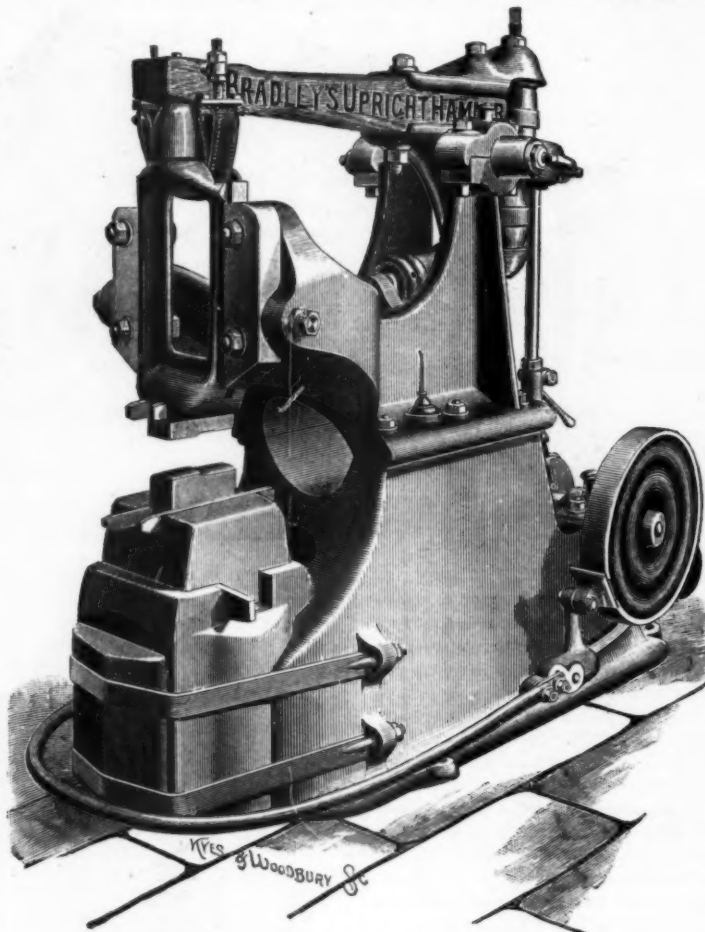
Messrs. Bradley & Co., of Syracuse, N. Y., say that 'having for many years manufactured and sold the Bradley cushioned helve hammer with unprecedented success, supplying them to nearly a thousand houses throughout the world, it has been impressed upon us that for many kinds of forge work there was a demand for a power hammer that would give a square, flat blow under all conditions of use, and having confidence that our knowledge of what was required of such a hammer would enable us to construct a tool fully adapted to the requirements of the business, we have, by adopting many of the important features so long and successfully used in our helve hammer to an upright form, produced the Bradley upright cushioned helve hammer, which we have thoroughly perfected and tested, and are now prepared to furnish in several sizes. We claim for this hammer that it has more valuable points of merit in power and accuracy of blow, simplicity and ease of adjustment, range of work, economy of power, and durability, than any similar tool ever made. It is adapted for use on all kinds of forging in general job shops, railroad car works and carriage factories, including die work of every nature.'

As will be noticed by the illustration, the hammer is operated by an eccentric at the rear, connected by a pitman to the saddle or oscillator, which carries the helve; to this helve is attached the hammer head. By the use of rubber cushions the force or weight of blow is multiplied many times, but with a degree of elasticity that removes all danger of breakage, and at the same time so thoroughly cushions the jar that none is perceptible in the working parts of the hammer when the blow is struck. In this way the blow is made to imitate the action of a hand hammer, and is the nearest possible approach to that of the smith's arm attainable by mechanical ingenuity; the hammer head gets away from the work instantly after striking, and the work is not chilled. A common experiment with this hammer is to make a cold iron rod red hot with a few blows.

Every working part of the entire hammer is in full view of the operator, and the whole is so simple in construction and manner of adjustment that the most inexperienced hammersman has no trouble in operating it to its full capacity at once. A split friction sleeve on the pitman at the rear of the hammer allows the length of stroke to be instantly adjusted—a matter of great

other make of hammer in existence, the opening or distance between dies when at rest can be varied from actual contact to 6 to 7 inches in the smallest size of hammer, and 12 to 15 inches in the larger sizes. These variations can be brought about instantly, making the hammer especially valuable in jobbing shops where material differing greatly in size has to be worked. In making these various changes no other

Having profited by this experience, we are able to judge of the best material to use and the proper proportion of each part, in order to secure the greatest durability. This same experience has also caused us to 'make haste slowly,' so much so that hammers of this style were in daily use in several factories besides our own for more than a year before bringing them to public notice, so that now we are in position to give a strong



UPRIGHT CUSHIONED HELVE HAMMER.

of the working parts of the hammer have to be adjusted, as the one operation of changing the length of stroke adjusts every working part at the same time.

Messrs. Bradley & Co. say: "In the matter of economy of power, it is conceded beyond argument that the merits of a properly constructed power hammer greatly overshadow those of a steam hammer, if power

guarantee with each hammer as to durability, as well as to the various other points that go to make up a successful tool of this character.

We are now prepared to furnish these hammers in ten sizes, the weights of the hammer-heads ranging from 15 pounds in the smallest to 500 pounds in the largest. Many times we can be of service in recommending the size most suitable for the work to be done, and always hold ourselves in readiness to give our customers the benefit of our experience."

Natural Gas Dearer Than Coal.

It is to be observed that the recent action by which the natural gas magnates of Pennsylvania have advanced the price of that fuel until it is now made to cost more than coal, is not as loudly heralded by the Pittsburgh and Wheeling papers as were the discoveries of nature's bounty some two or three years ago. Now that most of the manufacturing establishments have made expensive alterations to provide for the use of natural gas, they are confronted with a demand which means either heavier fuel bills than before the abandonment of coal, or a return to the former dirty and unsatisfactory method of obtaining heat. Of course they will have to submit to the imposition at the start, but public opinion should be so strong on the subject as to compel the gas monopolists to recede from their unjust demands. That nature's free gift to man so rich in caloric properties as to produce practically perfect combustion, and so easy of access as to simply require tapping and safe conveyance, should be so manipulated as to cost consumers more than coal, produced at great cost in labor and transportation, is one of the mysteries of American financiering.—Cleveland Iron Trade Review.

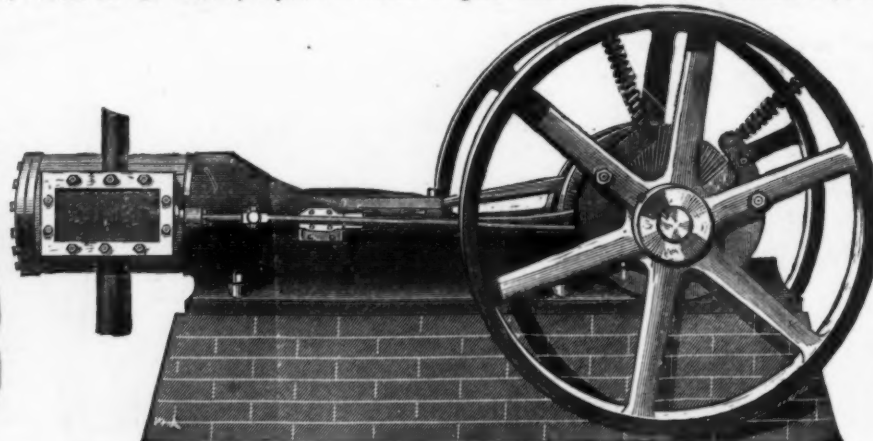


FIG. 2.

value when material greatly differing in size has to be successfully worked—a point that every hammersman will at once appreciate. By a very simple arrangement the keys holding both upper and lower dies are removed, as well as driven in from the front, instead of compelling the use of a long bar in driving out the keys from the rear—a valuable consideration when time is an object, or in adjusting dies where accuracy is desired.

By the use of the friction sleeve on the pitman, a device said to be used with no

costs anything; and it has been an undisputed claim of ours that the power it takes to operate one steam hammer would run five Bradley hammers of corresponding sizes up to their full capacity, an unanswerable argument that fully covers the all-important question of economy.

Our long experience in the manufacture of power hammers has naturally caused us to become familiar with all classes of forged work, and the severe tests of strength that many parts of a hammer are subject to.

ESTABLISHED 1842.

I. B. Williams & Sons,

MANUFACTURERS OF

**OAK-TANNED
LEATHER BELTING,**

OF THE FOLLOWING GRADES:

"Extra Quality Short-Lap,"✧ **"Extra Quality,"** ✧✧ **"Standard,"** ✧★ **"Electric Light."** ★

—MADE FROM—

**BEST SELECTED
OAK BUTS,**

And Fully Warranted.

RAW-HIDE

AND

Tanned Lace Leather,

LOOM STRAPPINGS, BELT LEATHER,

AND

Covers of TOP ROLLS.

—DEALERS IN—

Manufacturers' Supplies.Samples and Prices sent on application. Particular attention paid to **BELTING OF COTTON AND WOOLEN MILLS.**

ESTIMATES FURNISHED.

DOVER, - N. H.✧ **GET THE BEST.** ✧**THE HERCULES
WATER WHEELS****Are the Best Water Wheels ever made.**A Good Water Wheel Increases
The Value of Your
Whole Plant.Get the Best at First, and Avoid
the Expense and Delay of
Changing the Wheels.A Good Wheel will serve you
well for Twenty Years.The Best is the Cheapest. It Does
More Work, Lasts Longer, and
Costs no more for Gears
and Setting than a
Common Wheel.The Hercules Gives the Most Power
for its Size and the Highest
Average Percentage from
Full to One-half Gate
of any Wheel
ever made.**What Southern Users Say of the Hercules.**

There is probably no higher authority in the South on water wheels than Mr. John Hill, civil and mechanical engineer, of the great Eagle & Phoenix Cotton Mills, at Columbus, Ga. Read what he says of the Hercules Wheel.

COLUMBUS, GA., April 30, 1887.—In our mill (the Eagle & Phoenix) we have twenty-one (21) water wheels of various kinds, three of them being Hercules. I regard the Hercules as being by far the best wheel of any we have. It is the best in workmanship, absence from repairs, large per cent. in power, and in general satisfactory results. I know of no wheel its equal. **JOHN HILL.**KENTMERE, DEL., April 27, 1887.—We put in, nearly two years ago, a 30-inch Hercules Wheel, running under a 144-foot head. It is driving up to full regular speed three hundred and three heavy looms, with only half gate. We are about to enlarge the weave mill and add three hundred more looms, which will be driven by the same wheel. We cannot speak too highly of the Hercules. It has absolutely run without cost or derangement since it started, and has given eminent satisfaction in every way. **JAMES RIDDLE, SON & CO.**CLARKSVILLE, GA., April 20, 1887.—I have put in two Hercules Wheels, one about six years since and the other in 1883, and think so highly of the wheel that I shall use another in cotton mill this company is now constructing. Neither of the wheels alluded to have given the slightest trouble, and their working has been perfectly satisfactory in every way. **J. W. ROBERTSON, General Manager Porter Woolen Mill.**ROSWELL, COBB COUNTY, GA., April 29, 1887.—The Hercules Wheels have given us perfect satisfaction. **F. J. MINHINETT, President Roswell Manufacturing Co.**MARIETTA, GA., April 30, 1887.—I am using four Hercules Water Wheels, two 12-inch, one 24-inch and one 30-inch. They have given me perfect satisfaction, and I think that they are the best wheels that I have ever seen. **S. A. ANDERSON.**

PACOLET, S. C., April 29, 1887.—We have a 54-inch Hercules Water Wheel running, under 20 foot head, 12,000 spindles and 328 looms, with other necessary machinery. Has been running about three and a-half years, and has never given us the slightest trouble; not an hour's stoppage during the whole time.

JOHN H. MONTGOMERY, Pres. and Treas. Pacolet Manufacturing Co.HOLCUM'S ROCK, BEDFORD COUNTY, VA., April 28, 1887.—The Hercules Wheel has given entire satisfaction. **J. A. HARRIS & CO.**BUZELA, GA., April 29, 1887.—I have been using a 21-inch Hercules Water Wheel since August, 1880, and unhesitatingly say it is the "best" wheel. It has performed with utmost satisfaction, and given more power than the makers claim, using water with more economy than any wheel I ever knew. **BRAD. MERRY.**

If you want to buy a new water wheel, if your old wheel does not give absolute satisfaction, if you would like to know just how perfect a water wheel can be made, or if you are in any way interested in water wheels, it will pay you to write for CATALOGUE NO. 3 to the

HOLYOKE MACHINE CO.
WORCESTER, MASS.

MACHINERY! MACHINERY!
NEW AND REBUILT, { LOWEST RATES OF FREIGHT OBTAINED

OVER 6,000 MACHINES DESCRIBED AND SHOWN.

In endless variety, fully described, with prices annexed, in our catalogues as below specified.

Catalogue No. 44.—Machine Shop and Blacksmith Equipment. 80 pages, each 14 in. x 11 in.
Catalogue No. 45.—Engines, Boilers, Pumps and Steam Fittings. 72 pages, each 14 in. x 11 in.
Catalogue No. 46.—Wood Working and Grist Mill Machinery, Water Wheels and Mill Supplies. 126 pages, each 14 in. x 11 in.

Send us stamps for catalogue, stating exactly what class of machinery you require, and in what paper you saw the advertisement. **W. E. DREW, Agent,**
S. C. FORSAITH MACHINE CO., Machinists and General Machinery Dealers, **Manchester, N. H.**

SAVE FUEL.

Are you putting cold water into your boiler?

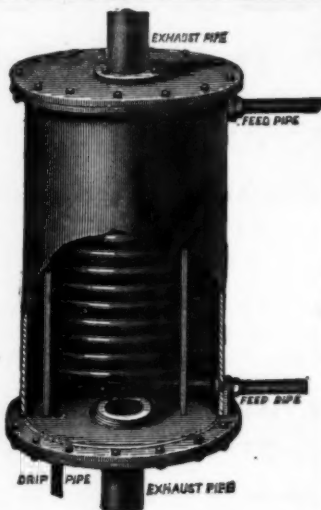
You can heat it boiling hot with the exhaust steam out of your engine.

You would save TWENTY-FIVE PER CENT. of the fuel required to do the same work without a

• Feed Water Heater. •

Send for our catalogue on this subject.

THE D. A. Tompkins Co. Charlotte, N. C.



Steam Car Heating.

Our Reducing Valves are now in use by the following railroads: PENNSYLVANIA; BOSTON AND ALBANY; LEHIGH VALLEY; NEW YORK, SUSQUEHANNA & WESTERN; E. TENN., VA. & GA.; BURLINGTON. CEDAR RAPIDS & NORTH-ERN. Also by the MARTIN, SEWALL & GRAYDON CAR HEATING COMPANIES.

MASON REGULATOR CO., Boston, Mass.

Shafting, Hangers.

Castings of every Description made. Stationary, Distillery Mill and Boiler Work.

JNO. N. MARQUETTE, 118 W. Falls Ave., BALTIMORE, MD.

EDOUARD SIDEL, ARCHITECT,

Birmingham, Ala.

Architect of the CALDWELL HOTEL,

The MORRIS BUILDING, etc., etc.

To Secure **SOUTHERN TRADE**
ADVERTISE IN THE
MANUFACTURERS' RECORD.



Keep Your Belts From Slipping

And save your power by using

FRICION COVERING FOR PULLEYS.

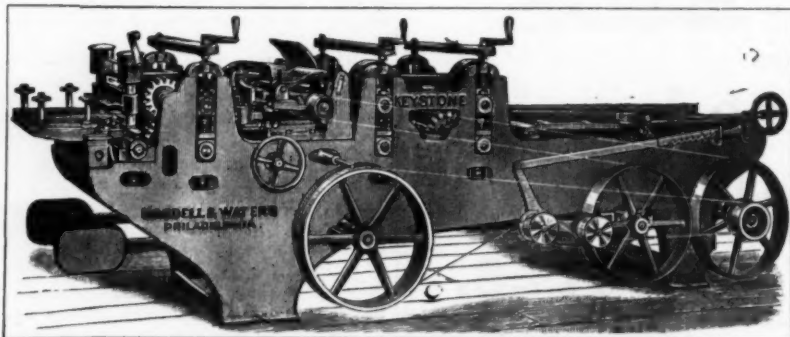
Satisfaction Guaranteed. Easily Applied. No Rivets. Effective.

National Pulley Covering Co.

BALTIMORE, MD.

"KEYSTONE"

Rapid Feed Flooring Machine.



SEND FOR DESCRIPTIVE CIRCULAR AND PRICES.

GOODELL & WATERS, Manufacturers,

WESTERN WAREROOMS:

11 and 13 S. Canal Street,
CHICAGO, ILL.

MR. C. L. RICE, MANAGER.

3002 Chestnut Street,

PHILADELPHIA.

ALABAMA'S GREAT MINERAL WEALTH

SURROUNDS THE

★ CITY OF TALLADEGA, ★

Which, according to statistics, is the **MOST HEALTHFUL CITY IN ALABAMA**, and the **County Seat of Talladega County.**

THE CITY HAS A POPULATION OF 5,000, AND ITS POPULATION IS RAPIDLY INCREASING.

TALLADEGA is on the main line of the E. T. V. & G. Railroad, the A. & A. Railroad, and is the present terminus of the T. & C. Railroad. Work is rapidly progressing on the Birmingham & Savannah Air Line Road, between Birmingham and Savannah, and within twelve months this road will be completed via Talladega from Birmingham to Savannah, which will place Talladega on the direct line from Birmingham to deep water on the Atlantic, making

TALLADEGA ONE OF THE BEST DISTRIBUTING POINTS IN THE STATE.

THE CITY HAS

AN EXCELLENT SYSTEM OF COMMON GRADED SCHOOLS,

With a scholastic population of 500, and **THE MOST COMMODIOUS AND ATTRACTIVE PUBLIC SCHOOL BUILDING IN THE STATE.** The main building is a three-story brick, slate roof structure, well ventilated, heated by steam; has accommodations and seating capacity for 500 pupils. This school is owned and sustained by the city. All branches of English literature, foreign languages, music, the sciences and art, are taught for a nominal tuition. Among other educational institutions are the following:

SYNODICAL FEMALE INSTITUTE, Property valued at \$50,000.

D. D. & B. INSTITUTE, Property valued at \$150,000.

BLIND INSTITUTE, (in course of construction,) property valued at \$150,000.

FOSTER COLLEGE, property valued at \$150,000.

No other city in Alabama has so many educational institutions and so many public buildings.

← TALLADEGA HAS THE MOST COMPLETE SYSTEM OF WATER WORKS IN THE STATE. →

The stand pipe has a capacity of 175,000 gallons, and into this reservoir a supply of fresh, clear, pure water is pumped every day from a large spring located in the heart of the city, which discharges over 2,000,000 gallons per day. The gravity pressure from this system is 90 pounds to the square inch in the business portion of the city. The city has broad streets, well macadamized and shaded with beautiful trees, and is well lighted with a **SUPERIOR QUALITY OF GAS.** Sixty fire plugs and forty gas lamps protect against fire and illuminate the streets.

A LARGE FURNACE PLANT gives employment to thousands of hands, and makes a high grade of chilled car-wheel iron from ores, limestone and coal within ten minutes haul by rail, or an hour's haul by wagon. **FOUR LARGE LUMBER MILLS**, with an aggregate daily capacity of 200,000 feet of lumber, cut from the long-leaved yellow Pine of this country. **FOUR BRICK YARDS** are in active operation. A SASH, DOOR and BLIND FACTORY, a FOUNDRY, MACHINE SHOP, FLOUR MILL, COTTON-SEED OIL MILL, and various other industries are in successful operation, and the TALLADEGA ICE CO. cools the thrifty population with pure ice at 50 cents per hundred. Another large furnace plant will be completed within the next ten months. A Spoke and Handle Factory and many other industries are projected, with a view to early completion.

Taxable property has increased 100 per cent, within the past twelve months. The rate of taxation is limited in the city charter to half of one per cent., and the city offers an exemption from taxation to all manufacturing enterprises for a period of ten years. The county of Talladega supplies more crude material, in the way of minerals and timber, than any other county in the State. Almost within the corporate limits of the city are extensive deposits of the highest grades of limonite ores, yielding 50 to 58 per cent. metallic iron, with only a trace of phosphorus, and limestone abounds in the greatest abundance. Coal is within twenty miles by rail.

THE TALLADEGA LAND & IMPROVEMENT CO. owns 5,000 lots suitable for residences, business and manufacturing, in and adjacent to the city. Lots are donated to manufacturing enterprises, and liberal inducements offered to actual settlers. SPRING LAKE PARK is owned by this company, and it is being made the most attractive resort in the State. The lake covers an area of seven acres, and is a beautiful sheet of clear spring water. Parties seeking a healthy climate, free from malaria and epidemics, and a prosperous city, are invited to visit Talladega. Address for maps, etc.

The Talladega Land & Improvement Co., ⇄ Talladega, Ala.

ATHENS, East Tennessee

THE COMING

→ Iron and Manufacturing City of the South. ←

Athens is the county seat of one of the most fertile counties in East Tennessee. The health of the city is unsurpassed, and is **ABSOLUTELY FREE FROM ALL MALARIAL OR EPIDEMIC DISEASES**. The surrounding scenery is very fine. From the main avenue the whole valley of East Tennessee can be seen, from the Cumberland Mountains on the west to the Great Smoky Mountains on the east; some of the tallest peaks east of the Rockies being in full view. FINE MINERAL SPRINGS are adjacent and are popular summer resorts. The society of Athens is excellent. A cordial welcome is extended to all law-abiding people locating in the town. The EDUCATIONAL FACILITIES are good. Beside public and preparatory schools, Athens is the seat of **THE GRANT MEMORIAL UNIVERSITY**, which has an enrollment of over 300, and whose graduates include some of the most distinguished citizens in the country. Among the industries and institutions of the place in active operation are:

THE ATHENS BUILDING & LOAN ASSOCIATION, \$250,000. THE ATHENS WOOLEN MILLS, \$100,000.

THE FIRST NATIONAL BANK, \$50,000.—To be increased at once.

FOUNDRY & MACHINE SHOPS, \$25,000.

FURNITURE WORKS, \$15,000.

FLOURING MILLS, \$20,000, etc.

500 men are now at work on the new railroad from Athens to the

RICHEST IRON FIELDS IN THE SOUTH.

JUST EAST OF THE TOWN.

Only eight miles from Athens are **VEINS OF RED FOSSILIFEROUS ORE 11½ FEET THICK**, and 4 to 12 miles beyond are **THE LARGEST DEPOSITS OF BROWN ORES IN THE SOUTH**. The ores of both varieties, in addition to being inexhaustible, are both superior in quality to any ores of either variety at present mined in the South. An assertion that can be sustained. Coke can now be obtained at the lowest prices, and in addition a new railroad is now projected to the Cumberland Coal Fields, only 22 miles distant. These roads will give Athens **UNSURPASSED SHIPPING FACILITIES**. The road under construction will penetrate large deposits of Tennessee Variegated Marble; also an Unopened Timbered Region, and will develop the

Largest Colored Slate Deposits in the United States.

These quarries are now being opened, and are pronounced by experts Absolutely Inexhaustible, and equal in quality to the finest Vermont Colored Slate.

The ATHENS MINING & MANUFACTURING CO.

Have alone just contracted for the erection of over

\$500,000 IN NEW MANUFACTURING ENTERPRISES

At Athens, including a 100-ton Blast Furnace, cost \$200,000; Cotton Mills, cost \$150,000; Furniture Works, employing 200 men, cost \$100,000; Hotel, cost \$60,000; Water Works, Street Car Lines, &c. These improvements have been commenced which, added to other improvements projected, will add

\$1,000,000 OF NEW MANUFACTURING ENTERPRISES TO ATHENS.

The company desire to open correspondence with parties desiring to locate, and will extend liberal inducements in addition to gifts of sites in order to induce New Manufacturing Enterprises to locate in Athens. City property is doubling in value every few months, and at present low prices is beyond question a very fine investment.


The Athens Mining & Manufacturing Company,

R. L. BRIGHT, President.

R. J. FISHER, Secy. and Genl. Manager.

DECATUR, ALA.

Offers outside investors better inducements to locate than any other

 CITY IN THE SOUTH. 

AS A CITY OF

Mammoth MANUFACTURING Enterprises,

She has few equals and no superiors in the South.

There have been located at Decatur in the last four months the following Industries :

THE DECATUR LAND, IMPROVEMENT & FURNACE COMPANY. Has 50,000 ACRES of Iron, Coal, Mineral and Timber LANDS
The Louisville & Nashville Railway Car Works. Cost of Buildings, \$300,000.

Charcoal Company's plant, costing \$120,000.

A seventy-ton Charcoal Iron Furnace, costing \$190,000.

A one hundred-ton Blast Iron Furnace, costing \$225,000.

The Decatur Iron Bridge Construction Company; cost of plant, \$100,000.

The American Oak Extract Company's plant, costing \$60,000.

Ivens & Sons Steam Boiler and Engine Works, costing \$100,000.

Morse Cotton Compress plant, costing \$60,000.

Decatur Lumber Company, Saw and Planing Mills, costing \$50,000.

Berthard & Co., Sash, Door and Blind Factory, cost \$15,000.

The Decatur Street Railway Company.

The Telephone Company.

Brush Electric Light Company, cost \$10,000.

The Ironton Wheelbarrow Company, cost \$25,000.

Howland & Co's Water Works System, costing \$200,000.

Bleymeyer Artificial Ice Company, cost \$10,000.

Four Mammoth Brickyards.

Jones, Poley & Co's Lumber Yards.

The Hoosier Mills & Building Company.

The Gate City Sash & Door Company.

Arantz Bro's Mills and Lumber Yards.

Grant & Co's Furniture Factory.

Southern Lumber Company.

H. S. Freeman's Mills and Lumber Yards.

The Alabama Farmer's Friend Fence Machine Company.

The Decatur Artificial Stone Company.

Decatur Chain and Architectural Iron Works, capital \$100,000.

Natural Gas Company, capital \$200,000.

First National Bank, capital \$100,000.

The Exchange Bank of Decatur, capital \$100,000.

Merchants' Insurance Company, capital \$100,000.

Decatur Building Association, capital \$300,000.

Decatur Building Company, capital \$1,000,000.

Buchheit's Bottling Works.

Decatur Printing Company.

Two daily papers, three weekly papers.

Two hotels are building—one \$60,000, one \$300,000; the largest in the South.

Grand Opera House, \$100,000.

THERE ARE OTHER

Mammoth Enterprises

Locating here, and contracts are being made with some of the most extensive industries in the United States.

Decatur is the Healthiest city in Alabama, the death rate among whites for 1886 being only 11 in 1,000.

Decatur Land, Improvement & Furnace Company.

E. C. GORDON, President.

H. G. BOND, Vice-Prest. and Gen. Manager.

W. E. FOREST, Secretary.

This Company has been pre-eminently successful in promoting the interests of the city of Decatur.

CORRESPONDENCE SOLICITED WITH PARTIES SEEKING LOCATIONS.

SHEFFIELD

◆ COLBERT COUNTY, ALA. ◆

The Iron Manufacturing Center of the South.

BEING at the head of navigation, and on the south bank of the Tennessee river, Sheffield is the natural outlet for the mineral and manufacturing products of Alabama and neighboring States seeking a water route to points on the Ohio and Mississippi rivers, and to the Gulf of Mexico, as well as the best distributing point over Alabama, Eastern Mississippi and East Tennessee, South Carolina, Georgia and Florida for Northern and Western produce, groceries, provisions, machinery, &c. Four railroads certain, and several others assured. Principal shops of Memphis & Charleston Railroad will be erected here pursuant to written contract. These will employ between four hundred and five hundred mechanics, and consequently, with their families, will make an increase in population of at least two thousand people. Shops of three other railroads are contracted to be located here.

◆ Five Blast Furnaces Now Under Construction, ◆

Of which one is nearly finished, and the remaining four contracted to completion next spring, have estimated capacity of 700 tons pig iron per day. This is 40 per cent. more than now manufactured at Birmingham, Alabama. Experts do not hesitate to say that iron can be manufactured more cheaply at Sheffield than at Birmingham, and its river transportation facilities will enable Sheffield iron to reach the principal markets at a saving of from

\$2.00 TO \$2.50 PER TON.

A first-class semi-weekly newspaper, printed by steam, is regularly issued. Furniture Factory, Bottling Works, Bakery, 3 Steam Brick Works, 2 Hand Brick Works, 2 Steam Wood-Working Establishments, Water Works, 2 Banks, a Savings Bank, and Steam Job Printing Office already in successful operation, and Iron Pipe Works, 15-ton Ice Machine and five-story hotel, with all modern appliances, will be erected. The Cleveland Hotel, Park House and numerous boarding houses furnish accommodations to travelers. Postoffice, Telegraph Office and Express Office already established. Contracts have been made for the early erection of Electric Light Works, Paint Works, Agricultural Implement and Machine Works and Cotton Compress. Large Stove Works, Machine Shops, additional Iron Blast Furnaces, an extensive Charcoal and Chemical Plant, a large Rolling Mill and other manufacturing establishments under consideration, and will probably be built shortly.

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Drainage excellent. Splendid opening for men of push and energy. No "Old Foggy" element here.

No better point for profitable investment.

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And for Free Public Schools and Churches

Donated by Sheffield Land, Iron & Coal Company.

Population January 1st, 1887, 700; now, (August 21st, 1887,) by actual count, 2,583. Increase of population, 300 per cent. in eight months, and only limited by accommodations.

Three years ago the site of Sheffield was cultivated as corn and cotton plantations, and was without a railroad. Numerous two and three-story brick business houses, and one and two-story dwellings have been, and are being erected. The class of buildings will compare favorably with those in cities of 20,000 inhabitants.

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The Memphis & Charleston Railroad and the Sheffield & Birmingham Railroad are now in operation into Sheffield. The Louisville & Nashville Railroad Co. is now extending its Nashville, Florence and Sheffield division, which will be completed to Sheffield before the close of the year 1887. Surveys of three other railroads have been recently completed to Sheffield, which will soon be the best combined river and railroad transportation center in the South.

Every merchant and every established manufacturing enterprise is doing a profitable business. More are needed. For further information address

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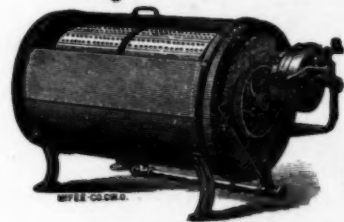
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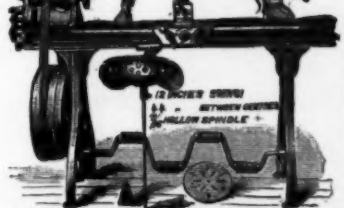
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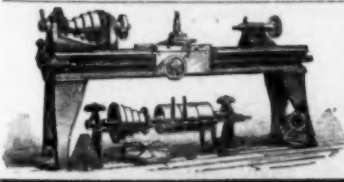
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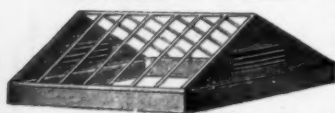
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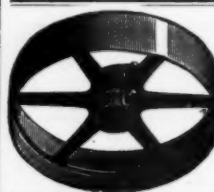
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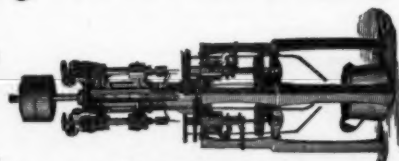
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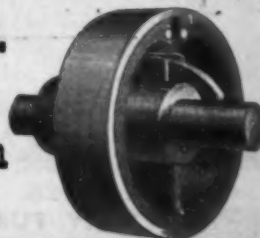
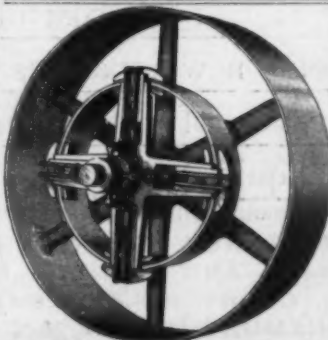
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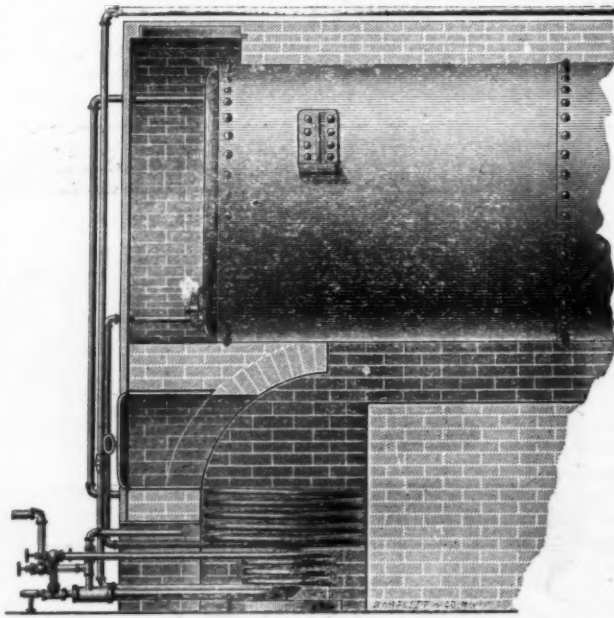
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No. 230 LEWIS STREET, NEW YORK, October 26, 1887.

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GENTLEMEN—We take pleasure in stating that the oil burner which you placed under our boiler gives us entire satisfaction, doing all that you claim for it, and we consider it a decided success.

Yours, etc.,

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In the past four years we have experimented with a great many burners for Glory Holes, and have found the "Seery Burner" to be the most satisfactory. Having been using four of these burners for twelve months at our works with the best results, we can recommend it as safe, economical and reliable.

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DEAR SIR—We have been using your Seery Burner for the last two weeks, and it has given us much satisfaction. From the present indications we believe it produces a greater heat with the use of less oil than any burner we have heretofore used. You now have an order from us to put in two more in our two other glory holes, which we trust you will execute without delay.

Very truly yours,

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TRADE NOTES.

THE Rome Foundry & Machine Works, of Rome Ga., in connection with their already established business, will build portable and stationary engines the coming spring and summer.

THE Van Dorn Iron Works of Cleveland, Ohio, have been awarded the contract for the iron and steel work for the Charleston, S. C., jail. They are specially prepared for doing this class of work, and all orders received will be executed with ability and despatch.

MESSRS. E. & F. N. SPON, of New York, publishers and importers of scientific books, have just issued a circular of two new books on paper-making, which are a complete guide to the manufacture of paper. This firm publishes a monthly list of engineering books that will prove of value to buyers of such books.

WE invite attention to the advertisement of Mr. Geo. V. Cresson, proprietor of the Philadelphia Shafting Works, Philadelphia. Mr. Cresson's is one of the most extensive establishments in his line in the country, and users of pulleys, hangers, shafting, etc., will find it to their advantage to correspond with him. He manufactures many specialties in these lines, and his illustrated catalogue, which will be sent upon application, will be found of much interest.

DURING January, Fletcher & Thomas, Indianapolis, Ind., have closed sales for their new quaker brick machines—one in Cambridge, Md.; one in Savannah, Ga.; Goldsboro, N. C.; a complete steam outfit at Decatur, Ala., including engines and boiler, kilns, drier, and everything to establish a first-class brick-yard; also a similar outfit for Tacoma, Washington Territory; one in Stockton, Cal., and one in Indiana. This firm are now the sole agents for the new quaker machine for the entire Southern States.

AN illustrated catalogue and price-list has been issued by the Thompson Manufacturing Co., of Cleveland, Ohio, manufacturers and dealers in corrugated iron, crimped iron, beaded iron, double cap iron, iron ridge roll and ridging, iron frame buildings, iron truss roofs, galvanized iron gutters, etc. Referring to the growth of their business they say: "The large increase of our sales every year we attribute to the fact that during the past 16 years we have made it a point to use good iron, see that it was manufactured and shipped in good shape, and that it was just what we said it was. We are satisfied with the result, and propose to 'fight it out on that line' if it takes 16 years more."

FRANK H. CLEMENT, 226 Mill Street, Rochester, N. Y., reports the outlook for business during 1888 as excellent. His policy of continually improving the line of wood-working machinery, which he handles without increasing prices, except in a few necessary cases, has resulted in his obtaining quite a number of orders. Recent orders and shipments have been made of patent automatic lathes to Detroit, Mich., Clinton, Iowa, San Francisco, Cal., Binghamton, N. Y.; patent buzz planers to Adams, Mass., Lawville, Jamestown and Binghamton, N. Y.; Detroit, Mich., Evansville, Ind., Louisville, Ky.; saw benches to South Bend, Ind., Meriden, Ct., Adams, N. Y.; band saws to Grand Rapids, Mich., San Francisco, Milwaukee, Wis., Bangor, Pa., New Orleans, La., Texarkana, Tex., Aurora, Ill., Athens, Ga., Syracuse, N. Y.; besides a large number of these and other tools to parties throughout the Northern States.

NEW PROCESS TWIST DRILL CO.—Drills are now being manufactured in Taunton, Mass., by a new process, which consists in forging them to the proper shape while hot

and pliable without milling or cold rolling. By this means the metal is compressed and its molecules brought into such a compact condition that it is left exceedingly hard and firm, and is said to be capable of standing more strain and torsion, and will also hold its cutting edge better, than those made by any other processes. We are farther informed that all sizes of drills up to one-half inch are made from P. S. Stubbs' steel, and all above one-half inch from Thos. Firth & Sons' steel. The drills manufactured by this company covers the general range of trade and demand, and, while made with particular reference to the drilling metals, it will be found superior for other uses, especially for working hardwoods. They are made with round, taper and square shanks to fit the principle standard drilling and boring machines, or to work in the common brace or bit stock.

THE Pierce, Butler & Pierce Manufacturing Co. have recently purchased the large foundry and machine shops at Geneva, N. Y., and have doubled their capacity. They have just been through the East purchasing a large amount of new machinery for the development of their steam and hot water heaters, as they were not able last year to fill their orders and lost the sale of five or six hundred boilers, which they might have sold if they had had sufficient foundry room and patterns to turn out a larger number of boilers. This firm is now in position to turn out a much larger number of boilers another season, and hope to be able to supply the demand. Their orders now are coming from all over the United States and Canada. They have recently made large shipments to England, which is certainly an indication of the superiority of the Florida steam and hot water heaters. Upon inquiry it will be found that the Florida is pronounced by all the largest steam heating firms throughout the United States as one of the most complete and perfect boilers manufactured. Messrs. Pierce, Butler & Pierce propose to enter the season next year with a large quantity of boilers, as they now have one of the largest foundries and machine shops in this section of the State. Any orders addressed to them at No. 18 South Clinton street, Syracuse, N. Y., will receive prompt attention.

A MODEL BRICK-YARD.—Jacob Lorillard, of New York city, has erected at Keyport, N. J., the most complete brick-yard in the United States. The capacity at present is 300,000 per 24 hours. This capacity is soon to be increased to 1,000,000 per day, which will make it not only the most complete, but the largest brick-yard in the world. The plant is at Keyport, N. J., on an arm of the sea, about twenty miles from New York city, and shipments are made by water. The clay burns a beautiful red, and the farm on which the brick-yard is located contains 300 acres. The plant consists of a large brick building containing brick machinery, engine, boilers and electric light plant. Adjoining the building, in the rear, is a large brick clay house. In front of the main machinery building are the dryers, while at opposite end of the dryers the kilns are located. The kilns are eight in number and hold 1,000,000 brick each. Starting at the clay bank, where the clay is all dug with a steam shovel, it is dropped into cars, which are quickly drawn by power into the clay house, where the clay is dumped. It is then easily fed on conveyor belts, three in number, which convey the clay first into the large sized Penfield Compound Corrugated Clay Crusher and Stone Separator. It then passes through the pug mill and is dropped directly into the hopper of a Penfield No. 10 D brick machine. The brick are placed on iron cars, dried in tunnels, and burned in improved permanent kilns. The kilns are nearest the dock, and open directly toward it, where the brick are conveyed for shipment. All the main buildings, also dry-house, are covered with iron roofing. The brick-making machinery con-

sists of three No. 10 D Penfield brick machines, capacity of each, 50,000 brick per ten hours; three sets of four-roll crushers, and three pug mills. The works are arranged to run nights as well as days. The doors are not locked to visitors, and it will pay any one who is in New York city or vicinity to visit the works and meet the genial proprietor or his able assistants, Messrs. A. C. Jackson and Samuel Stanton.

FEBRUARY Wide Awake has come; bright with pictures and full of entertainment and wisdom for young folks. One series of papers alone is enough to make the fortune of a magazine. 'The Children of the White House,' by Mrs. Upton, a familiar sketch of the children of John Adams, with many curious portraits and relics. 'About Rosa Bonheur,' by Henry Bacon, is accompanied by copies of several of her pictures, with a portrait of the artist herself in her studio. 'My Uncle Florimond,' by Sidney Lusk, comes to its third instalment. Mrs. Sherwood takes 'Those Cousins of Mabel's' to Richfield Springs. Olive Risley Seward visits the great wall of China. Oscar Fay Adams occupies himself with Æsop, the story-teller. And many more. The number is very rich, varied and interesting. A sample copy can be obtained by sending five cents to the publishers, D. Lothrop Co., Boston.

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When visiting New York city, save baggage express and carriage hire, and stop at the Grand Union Hotel, opposite Grand Central Depot.

600 handsomely furnished rooms at \$1 and upwards per day. European plan. Elevators and all modern conveniences.

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THE American House, Boston, is one of the favorite hotels of that city. It has a large patronage of the best class of guests, and visitors will there find a hotel under the most perfect management.

THE Palace Hotel, Cincinnati, Ohio, is the best, finest furnished and most complete \$2.00 hotel in America. 250 rooms; 140 front rooms. Complete fire apparatus and iron balcony fire-escapes.

THE St. Charles Hotel, at Lowell, Mass., kept by Geo. R. Cushing, is the place for comfortable entertainment. Travelers will do well to keep it in mind.

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The Queen & Crescent Route, running trains from Cincinnati to New Orleans and Shreveport, La., and passing through Chattanooga, Birmingham, Tuscaloosa, Meridian, Jackson and Vicksburg, has, with its "Queen & Crescent Limited Express," reduced the time between Cincinnati and New Orleans (827 miles) to twenty-five and a half hours. This train leaves Cincinnati at 7:55 A. M., and arrives at New Orleans at 9:30 next morning.

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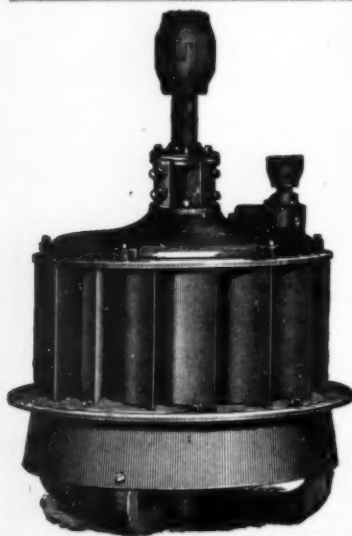


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Possesses more than Double the Capacity of other Water Wheels of same diameter, and has produced the Best Results on Record, as shown in the Following Tests at Holyoke Testing Flume:

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15-inch.	15.06	30.17	.8932
17 1/2-inch.	17.96	36.35	.8980
20-inch.	18.31	49.00	.8632
25-inch.	17.50	68.62	.8684
30-inch.	11.65	82.54	.8676

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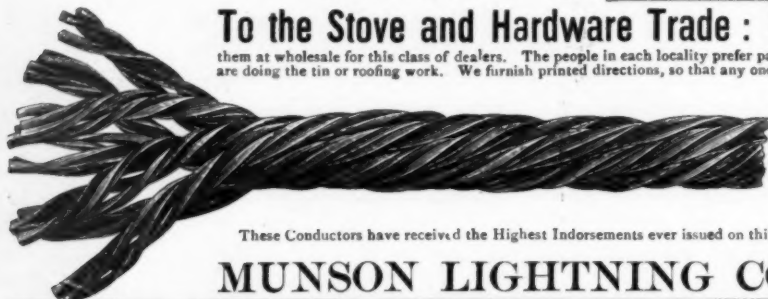
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THE LIGHTNING ROD TRADE has undergone a change in the past few years. Formerly men with wagons traveled over the country, but now these men have almost disappeared. The business of erecting rods on houses has passed into the hands of tinner, hardwaremen and builders, and we simply manufacture them at wholesale for this class of dealers. The people in each locality prefer patronizing a home firm, and you can just as well sell them their Lightning Conductors at the same time you are doing the tin or roofing work. We furnish printed directions, so that any one can put them up without difficulty. We also manufacture all kinds of



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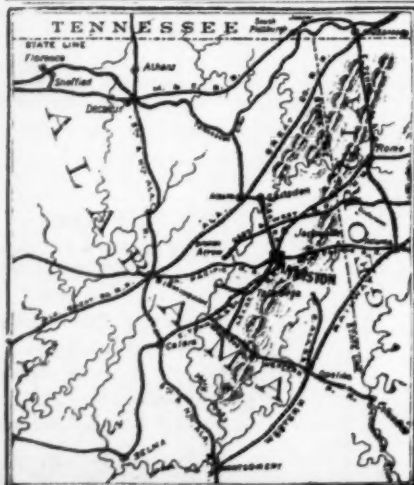
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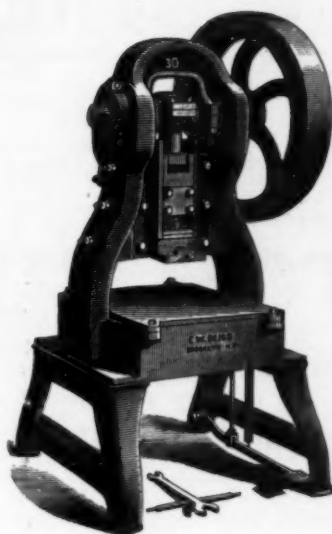
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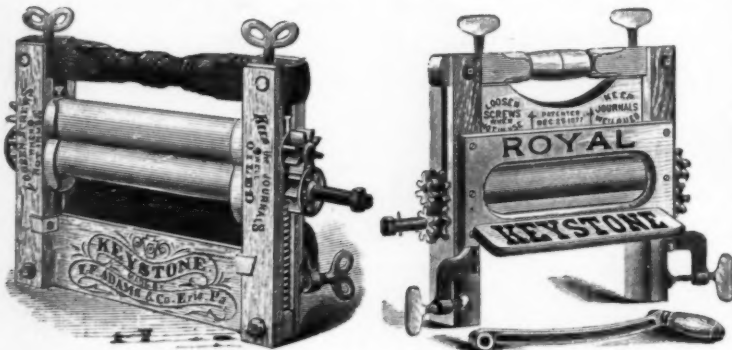
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Facts About Clothes Wringers.

IN the construction of the **KEYSTONE WRINGER** we have recognized the fact that there are several important features, in some of which all other wringers fail to a considerable extent. Most prominent among these are the Springs; they have been made, heretofore of wood or rubber, neither of which have sufficient elasticity to meet the requirements of a really first-class Wringer; besides this, both wood and rubber Springs will lose their elasticity in a short time, then the Wringer is but little better than it would be without Springs. To overcome this difficulty some manufacturers of Wringers have adopted the elliptic form of Steel Springs, effecting a slight improvement in durability. But to use a Spring of this kind in a Wringer, they have to confine it to such a limited length that it is impossible to get the amount of elasticity that is really necessary; besides, they seriously injure the frame by the side pressure which they have.

In the **KEYSTONE WRINGER** there are two long, heavily-coiled Wire Springs, made from the very best quality of Bessemer steel and tinned. They are placed below the lower Roll, and occupy that part of the Wringer frame that is necessary to accommodate the clamps, admitting the use of two very long Springs that will exert all the pressure necessary and give the Wringer fully double the capacity of any other form of Spring. The great length of the Springs gives them greater durability than can possibly be obtained from any other form of Spring of any kind of material, and they exert all their pressure directly upon the journals of the Rolls without injury to the frame.

It is very evident that a Wringer with such Springs will do better work with less labor and trouble, and that the Rolls (which are the life of the Wringer) are much less liable to be injured than would be the case if it had the clumsy, inelastic Springs that are used in other Wringers.

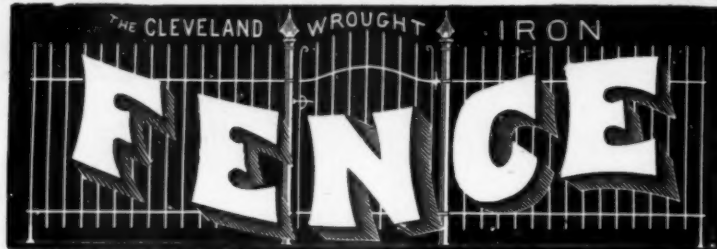
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These goods have become standard with the trade, and are sold by all the leading Jobbers in General and Saddlery Hardware in the United States at manufacturers' prices.

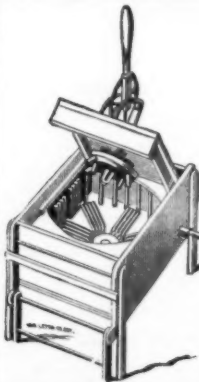
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We have furnished these machines to an appreciating public for the past twelve years, during which time the demand for them has increased steadily and rapidly.

Each Machine is Warranted to give Perfect Satisfaction

We want this machine represented in every city and town, and will give liberal discounts to dealers, and will guarantee the sale and satisfaction of them. Price, No. 1 Family Size, \$8; No. 2, Large Family, \$9; No. 3, Hotel Size, \$10. Write for Catalogue and Terms to the

HORTON MFG. CO., Fort Wayne, Ind., U. S. A.

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SELECTED LUMBER WHEELBARROW.

—Soft-wood Handles, Hard-wood Legs and Braces. Strictly Bolted.—



It is the same size, and contains all the elements of strength in the Champion. Its cheapness is made by not bending legs and braces, and by using a less expensive timber in its manufacture, but timber of ample strength and free from defects. The Junior is the choice of all people who prefer a larger wheel and a stronger frame than the common barrow, at a small advance in cost.

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Sheet Metal Work

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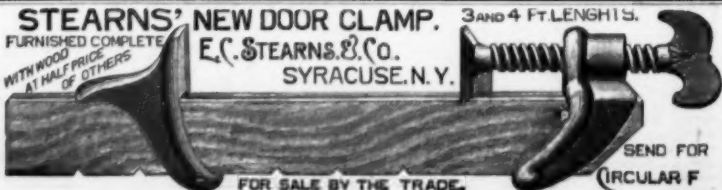
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FURNISHED COMPLETE
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OF OTHERS
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Manufactured iron is dull at former prices,
viz :

Ref. Has Iron, 1 to 6 1/2 to 1 1/2	# D.	2.100	2.400
" " " " 1 to 4 1/2 to 1 1/2	"	2.100	2.400
" " " " 1/2 to 2, round and	"	2.100	2.400
square	"	2.100	2.400
Hoop Iron, 1 1/2 wide and upward	"	2.300	3 1/2
Band Iron, from 1 1/2 to 6 in. wide	"	2.400	3 1/2
Horseshoe Iron	"	3 1/2	3 1/2
Navy and Navy	"	3 1/2	3 1/2
Black Diamond Cast Steel	"	8 1/2	9 1/2
Machinery Steel	"	3 1/2	4 1/2
Spring Steel	"	3 1/2	4 1/2
Common Horse Nails	"	8 1/2	9 1/2
Railroad Spike, 5 1/2 to 16	"	2 1/2	3 1/2
Boiler Bolts	"	2 1/2	3 1/2
Iron Boiler Plate	"	2 1/2	3 1/2
Boiler Tubes	"	500	4 list

Baltimore Charcoal Wheel Iron (all Baltimore ore).....	\$38	00	\$9	00
Virginia C. B. Charcoal Wheel Iron.....	\$37	00	\$9	00
Anthracite, No. 1.....	\$30	00	\$9	00
do do.....	18	00	\$9	00
do do.....	10	00	\$18	00
Mottled and White.....	14	00	\$15	00
Old Rails.....	32	50	\$2	00
Old Steel Rails.....	99	00	\$23	00
No. 1 Wrought Scrap.....	22	50	—	—
Old Car Wheels.....	2	00	\$19	50

Nails are quoted at \$2@2 10

PHILADELPHIA, Jan 31, 1888.

The latest is a projected road in Kansas some 1,200 miles in length. The projections are sufficient, if they all mean business, to keep all the rail mills running full time all the year. Apart from this there is very little of interest in the iron trade. It now begins to look as though the bar mills would be filled up with orders for a few months. The reduction to 2 cents has not altered actual prices, nor have orders been coming in as rapidly as was expected. The only change since a week or two ago is the receipt of considerable inquiry. Those familiar with the bar iron trade know there is an enormous amount of business to be covered within the next two or three months. The only thing is when the business will be placed. It costs a little more to make iron at this season than other seasons, but the iron makers are getting less for it and are complaining of their narrow margins. Some grooved iron sold the other day at 1.90. Pig iron is scarce as to good brands. \$22 was offered for some standard No. 1. There are a good many orders ready to be placed. A great deal depends upon the course of the strike. The miners are as determined as ever, and will not be as easily whipped as the Reading officials would like to see. A few orders for stove iron have been placed. Some little business is being done in Southern iron, but it does not amount to much. The demand for plate iron is likely to set in quite actively about the middle of February, or, perhaps, a little sooner. There are specifications already in hand. The coal strike is the unsettled problem to-day, and there is really no assurance when it will terminate.

Specially reported by ROGERS, BROWN & Co., Pig
Iron Commission.

CINCINNATI, January 30, 1888.

HOT-BLAST FOUNDRY.

Ohio and Southern Strong Coke No. 1.	119	90	80
" " " " " "	No. 2.	18	00
Ohio Soft Stonecoal,	No. 3.	17	00
Ohio Soft Stonecoal,	No. 4.	19	00
Mahoning and Shesango Valley Coke,	No. 5.	18	00
Hanging Rock Charcoal No. 1.		20	00
" " " " " "	No. 2.	21	00
Tennessee & Alabama Charcoal No. 1.		20	00
" " " " " "	No. 2.	19	00

Specially reported by GWO, H. HULL & Co., Commission Merchants for the sale of Hot and Cold Blast Pig Iron.

up for a few days longer we believe furnaces will slightly advance prices. There have been numerous instances where buyers expected to get irons at their own terms, but found that the furnaces were over-sold and could not furnish the irons desired at any price. We quote :

Specially reported by ROGERS, BROWN & Co. W.
W. BACHMAN, Resident Agent.

CHICAGO, Jan. 30, 1888.

COKE AND STONE COAL FOUNDRY.

Ohio (Hanging Rock) Softeners No. 1.....	\$1	50	\$85	\$0
" Blackband	"	50	\$85	\$0
" Jackson county	"	51	\$85	\$2
" Lake ore and cinder	"	51	\$80	\$8
Southern Coke, No. 3.....	30	50	\$3	00
" No. 2 1/2.....	30	00	\$0	00
" No. 3	19	50	\$20	00
CHARCOAL FOUNDRY.				
Lake Superior	\$31	50	\$2	50
Southern	31	00	\$3	00
Hanging Rock.....	24	00	\$5	00
CAR WHEEL AND MALLEABLE.				
Lake Superior.....	31	50	\$85	\$0
Standard Southern.....	35	00	\$6	00
Hanging Rock, cold blast.....	26	00	\$8	00
" " warm blast.....	34	50	\$5	50
OLD MATERIALS				
Old Rail, American.....	23	00	\$2	50
Old Wheels.....	30	00	\$3	50

Specially reported by ROGERS, BROWN & Co., Gay
 Building, 304 N. 3rd street, St. Louis. W. H.
 SHIELDS, Manager.

ST. LOUIS, Jan. 30, 1888.

grades at a shade below asking prices is proof that the market has a pretty good bottom to it. We quote for cash f. o. b. St. Louis:

CHARCOAL FOUNDRY.		
Missouri.....		\$19 00 00 00
Southern.....		19 00 00 00
COAL AND COKE IRONS.		
Southern.....		18 50 19 00
Ohio Softeners.....		20 50 03 50

Specially reported by LOWE & TUCKER, Brokers and Commission.

CHATTANOOGA, TENN., Jan. 30, 1888.

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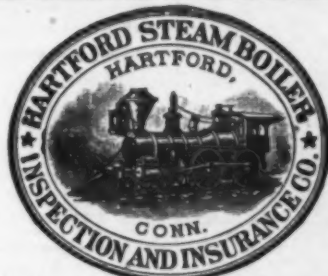
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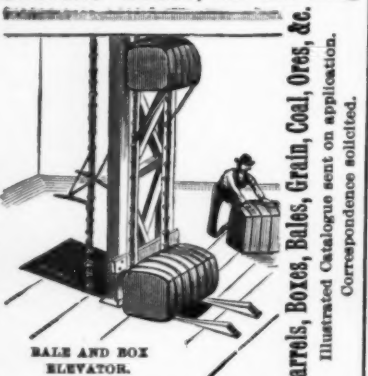
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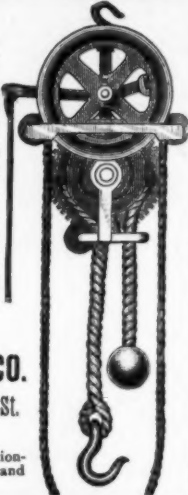


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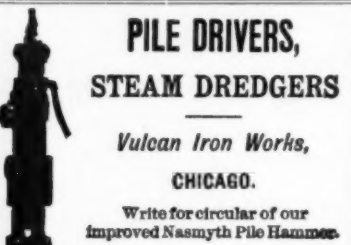


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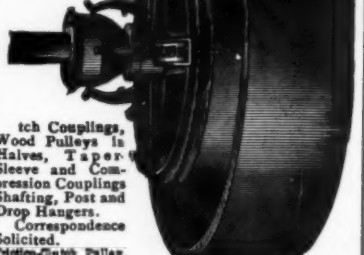


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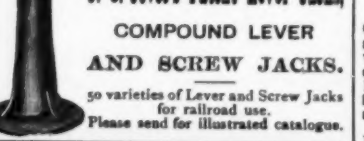
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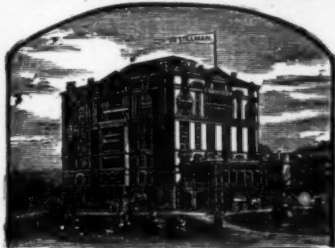
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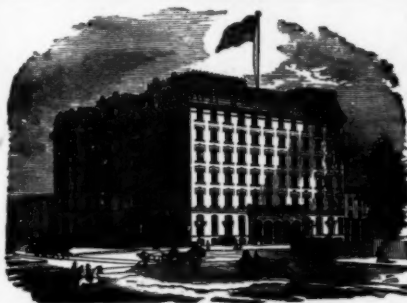
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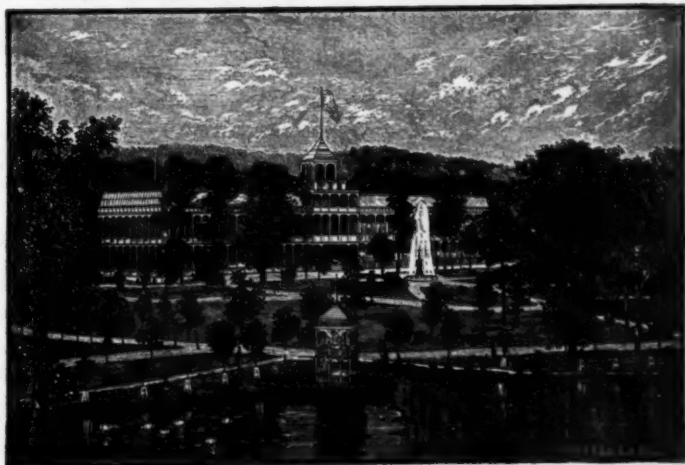
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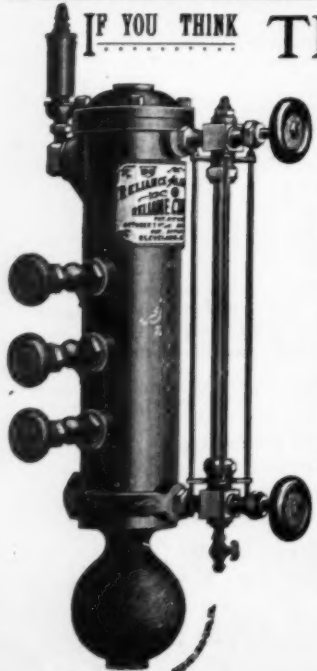
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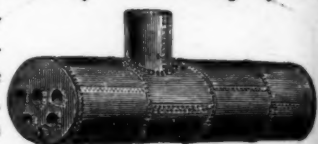
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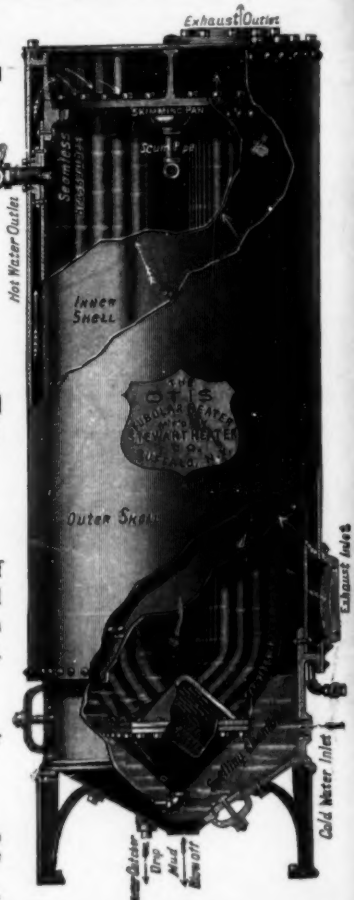
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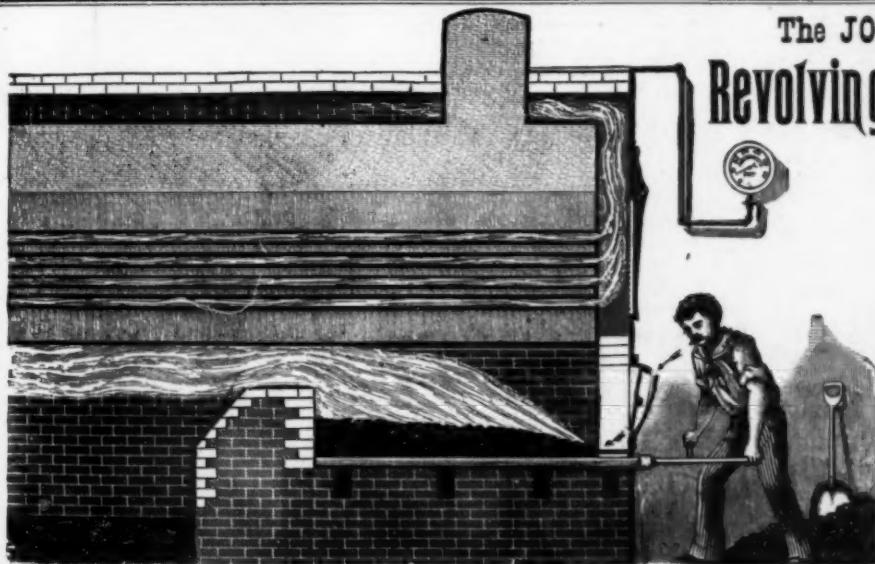
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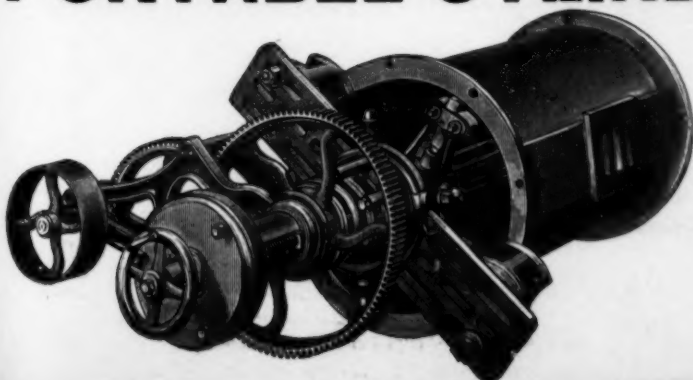
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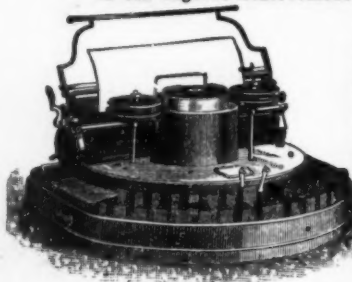
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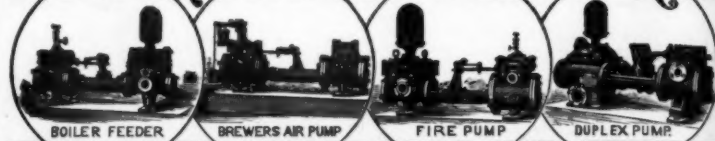
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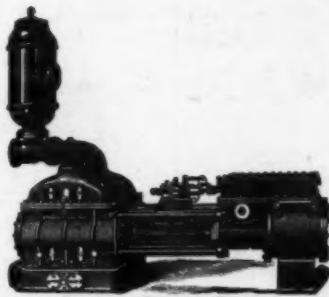
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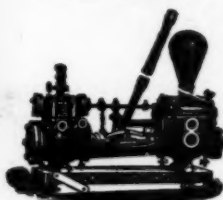
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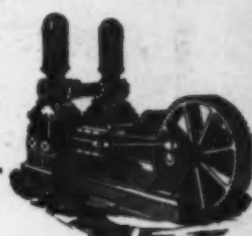
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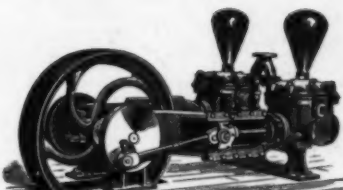
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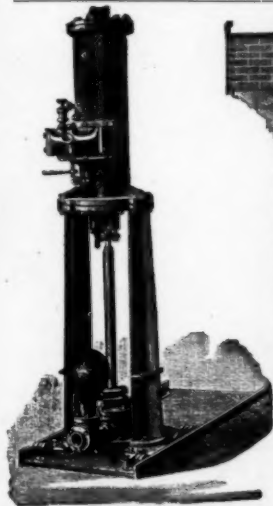
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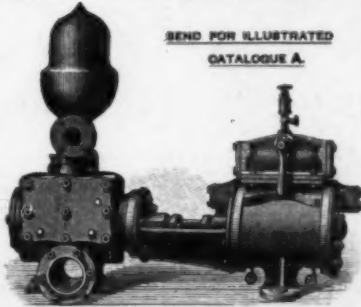
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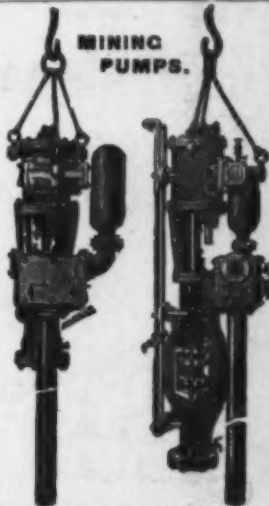
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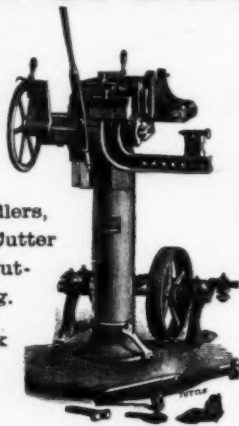
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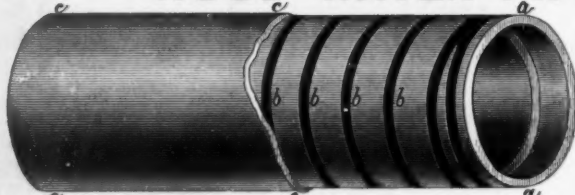
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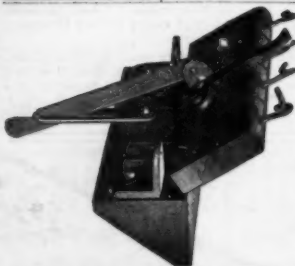
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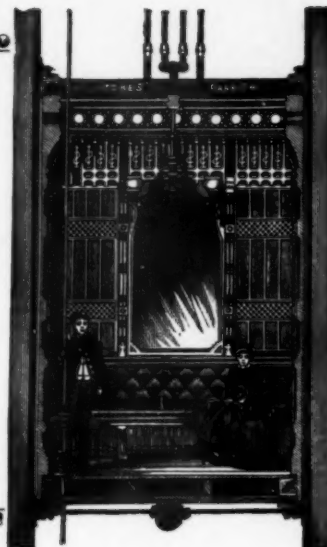
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